第31屆天然藥物研討會

藥學暨中醫藥學門成果發表會

The 31st Symposium
on Natural Products & Symposium
on Pharmacy
and Traditional Chinese Medicine

2016

10/14 FRI. ‧ 10/15 SAT.

INVITATION

敬邀

科技部 Ministry of Science and Technology

第 31 屆天然藥物研討會、藥學暨中醫藥學門成果發表會

The 31th Symposium on Natural Products & Symposium on Pharmacy and Traditional Chinese Medicine

目 錄

籌備委員會
Organizing committee

- 主任委員：吳永昌、許志宏
- 總幹事：廖志中
- 學術組：鄭源斌、蘇瑞欣、戴琦珍、林右晟
- 會場組：張欣暘、謝建台(實驗室)、連雅筑、陳致中
- 接待組：吳志中、翁靖如、林秀瑾、劉商隱、黃子胤
- 總務組：黃瓊瑤、陳嘉妤、林佳穎、陳明慧、陳淑莉、Aqib Khan

聯絡地址：高雄市鼓山區蓮海路 70 號 國立中山大學海洋科學院
電話：07-5252000 # 5058, 5030

研討會議程
Scientific program

The 31th Symposium on Natural Products & Symposium on Pharmacy and Traditional Chinese Medicine

Place: National Sun Yat-sen University, Kaohsiung
Time: Oct. 14th (Fri.) to 15th (Sat.), 2016

Oct. 14th

DATE/TIME	SPEAKERS	TOPIC TITLE
08：10～08：50	Registration	
08：50～09：30	Prof. Ying-Yao Cheng (President of NSYSU) Director-General Yi-Tsau Huang (Department of Chinese Medicine and Pharmacy, Ministry of Health and Welfare) Prof. Tian-Shung Wu (Chairman of the Society of Chinese Natural Products)	Opening/ Welcome Speech
	Moderator: Prof. Ming-Jung Wu, Prof. Jyh-Horng Sheu	
09：30～10：00	Prof. Kuo-Hsiung Lee (University of North Carolina at Chapel Hill, USA)	Modern Drug Discovery and Development Based on Ancient Chinese Herbal Medicine
10：00～10：30	Prof. Ning-Sun Yang (Academia Sinica, Taipei)	Molecular Targeting and Signaling Functions of Specific TCM Phytochemicals: Application to Inflammatory Diseases
10：30～10：50	Coffee break	
	Moderator: Prof. Yuan-Shiun Chang, Prof. Chih-Chung Wu	
10：50～11：20	Prof. Pei-Yuan Qian (The Hong Kong University of Science and Technology, Hong Kong)	Manipulation of Biosynthesis Pathways as a Tool for Bioactive Compound Discovery: a Story of Colibactin
11：20～11：50	Prof. Yoshinori Asakawa (Tokushima Bunri University, Tokushima)	Highlights in Phytochemistry of Bryophytes: Chemical Diversity, Biological Activity and Chemosystematics
11：50～13：30	Lunch	
	Poster report/ Workshop I: Genetics Generation Advancement, Workshop II: Chemical Abstracts Service	

	Moderator: Prof. Fang-Rong Chang, Prof. Ching-Kuo Lee	
13：30～14：00	Prof. Doralyn Dalisay (University of San Agustin, Iloilo)	Natural Products Localization in Intact Plant Tissue by High Resolution MALDI Mass Spectrometry Imaging
14：00～14：30	Prof. Yang-Chang Wu (China Medical University, Taichung)	How to Develop Anticancer Natural Products from Bench-to-bedside
14：30～14：50	Prof. Tzong-Huei Lee (National Taiwan University, Taipei)	Bioactive Natural Products from *Antrodia cinnamome*a – from Traditional to Functional Genomic Approaches
14：40～15：10	Prof Horng-Huey Ko (Kaohsiung Medical University, Kaohsiung)	Mechanism of Melanogenesis Inhibitors of *Artocarpus xanthocarpus*
15：10～15：30	Coffee break	
15：30～16：30	Poster Section/ Workshop III: Shimadzu Scientific Instruments	
	Moderator: Prof. Chang-Yih Duh, Prof. Ping-Jyun Sung	
16：30～17：00	Prof. Po-Wu Gean (National Cheng Kung University, Tainan)	Synergistic Inhibition of Tumor Growth by Combination Treatment with Drugs Against Different Subpopulations of Glioblastoma Cells
17：00～17：20	Prof. Tai-Long Pan (Chang Gung University, Taoyuan)	Investigate the Efficacy and Molecular Mechanisms of Herbal Formula on Liver Diseases with Systematic Biology
17：20～17：40	Prof. Chih-Hsin Tang (China Medical University, Taichung)	MicroRNA-432, Upregulated by Soya-cerebroside, Suppresses Monocyte Migration and Prevents Cartilage Degradation in an Rat Model of Osteoarthritis
	Visiting in NSYSU Campus	
18：30～20：30	Banquet (Sunset Beach Resort, NSYSU, Kaohsiung)	

Oct. 15th

DATE/TIME	SPEAKERS	TOPIC TITLE
	Moderator: Prof. Jih-Hwa Guh, Prof. Tsong-Long Hwang	
08：40～09：10	Prof. Ching-Shih Chen (Academia Sinica, Taipei)	Targeting Phenotypic Adaptation of Cancer Cells to Tumor Microenvironment: Challenges and Opportunities
09：10～09：40	Prof. Chia-Ning Shen (Academia Sinica, Taipei)	Development of Anti-cancer Strategies for Pancreatic Ductal Adenocarcinoma via Targeting Unique Metabolic Features of Cancer Stem Cells
09：40～10：10	Prof. Hai-Feng Chen (Xiamen University, Xiamen)	Disease Related Signaling Pathway Based Bioactive Compounds Discovery from TCM.
10：10～10：40	Coffee Break	
	Moderator: Prof. Yang-Chang Wu, Prof. Po-Wu Gean	
10：40～11：50	Prof. Shaw-Jenq Tsai (Director General, Department of Life Sciences)	MOST-DLS proposal writing and Open Discussion
11：50～13：30	Lunch	
	Poster report	
	Moderator: Prof. Sheng-Yang Wang, Prof. Mei-Hsien Lee	
13：30～13：50	Prof. Ya-Ching Shen (National Taiwan University, Taipei)	Recent Studies on Natural Products as Sources of New Lead Compounds with Potential Antitumor and Anti-inflammatory Activities
13：50～14：10	Prof. Ching-Chiung Wang (Taipei Medical University, Taipei)	The Effects of Si-Wu Tang on Stimulated Follicle Maturation
14：10～14：30	Prof. Jing-Ru Weng (National Sun Yat-sen University, Kaohsiung)	Triterpenoids from Wild Bitter Gourd Induce Apoptosis and Autophagy in Breast Cancer Cells
14：30～14：50	Prof. Pi-Hui Liang (National Taiwan University, Taipei)	Synthesis and Modification of Saponins and Glycolipids
14：40～15：10	Prof. Hsin-Yi Hung (National Cheng Kung University, Tainan)	Studies on Constitutive Androstane Receptor Activation of *Artemisia capillaris* and Coumarin Derivatives

15：10～16：00	Coffee break	
	Moderator: Prof. Jing-Gung Chung, Prof. Chieh-Hsi Wu	
16：00～16：20	Prof. Chi-Feng Hung (Fu Jen Catholic University, New Taipei City)	The Research and Development of Chinese Herbal Medicine Used for the Treatment of Aging and Disease in Skin and Eyes
16：20～16：40	Prof. Ya-Ling Hsu (Kaohsiung Medical University, Kaohsiung)	Novel Mechanisms and Approaches in the Drug Development of Cancers by Targeting Tumor Microenvironment
16：40～17：00	Prof. Mei-Chin Lu (Nationl Dong Hwa University, Pingtung)	Antileukemic Scalarane Sesterterpenoids and Meroditerpenoid from *Carteriospongia* (*Phyllospongia*) sp., Induce Apoptosis via Dual Inhibitory Effects on Topoisomerase II and Hsp90
17：00～17：30	Poster Awards & Closing Ceremony	
17：30~	Farewell	

第 31 屆天然藥物研討會、藥學暨中醫藥學門成果發表會
議程表

地點；國立中山大學海洋科學學院演藝廳

研討會日期：2016，十月十四日（週五）至十五日（週六）

十月十四日

日期/時間	演講人	主題
08 : 10～08 : 50	註冊/報到/聯誼	
08 : 50～09 : 30	鄭英耀 校長 (國立中山大學，高雄) 黃怡超 司長 (衛生福利部 中醫藥司) 吳天賞 理事長 (中華天然物學會/成功大學，台南)	開幕典禮，貴賓致辭
	主持人：吳明忠 教授、許志宏 教授	
09 : 30～10 : 00	李國雄 教授 (北卡羅來納大學 教堂山莊分校)	Modern Drug Discovery and Development Based on Ancient Chinese Herbal Medicine
10 : 00～10 : 30	楊寧蓀 教授 （中央研究院，台北）	Molecular Targeting and Signaling Functions of Specific TCM Phytochemicals: Application to Inflammatory Diseases
10 : 30～10 : 50	Coffee break	
	主持人：張永勳 教授、吳志中 教授	
10 : 50～11 : 20	錢培元 教授 (香港科技大學，香港)	Manipulation of Biosynthesis Pathways as a Tool for Bioactive Compound Discovery: a Story of Colibactin
11 : 20～11 : 50	淺川義範 教授 （德島文理大學，德島）	Highlights in Phytochemistry of Bryophytes: Chemical Diversity, Biological Activity and Chemosystematics
11 : 50～13 : 30	午餐	
	壁報論文/ 新儀討論會(一)：創源生技； 新儀討論會(二)：Chemical Abstracts Service	
	主持人：張芳榮 教授、李慶國 教授	

13 : 30～14 : 00	Doralyn Dalisay 教授 (聖奧斯丁大學，伊洛伊洛)	Natural Products Localization in Intact Plant Tissue by High Resolution MALDI Mass Spectrometry Imaging
14 : 00～14 : 30	吳永昌 教授 (中國醫藥大學，台中)	How to Develop Anticancer Natural Products from Bench-to-bedside
14 : 30～14 : 50	李宗徽 教授 (台灣大學，台北)	Bioactive Natural Products from *Antrodia cinnamome*a – from Traditional to Functional Genomic Approaches
14 : 50～15 : 10	柯宏慧 教授 (高雄醫學大學，高雄)	Mechanism of Melanogenesis Inhibitors of *Artocarpus xanthocarpus*
15 : 10～15 : 30	Coffee break	
15 : 30～16 : 30	Poster Section / 新儀討論會(三)：台灣島津	
	主持人：杜昌益 教授、宋秉鈞 教授	
16 : 30～17 : 00	簡伯武 教授 (成功大學，台南)	Synergistic Inhibition of Tumor Growth by Combination Treatment with Drugs Against Different Subpopulations of Glioblastoma Cells
17 : 00～17 : 20	潘台龍 教授 (長庚大學，桃園)	Investigate the Efficacy and Molecular Mechanisms of Herbal Formula on Liver Diseases with Systematic Biology
17 : 20～17 : 40	湯智昕 教授 (中國醫藥大學，台中)	MicroRNA-432, Upregulated by Soya-cerebroside, Suppresses Monocyte Migration and Prevents Cartilage Degradation in an Rat Model of Osteoarthritis
	西灣游	
18 : 30～20 : 30	晚宴(地點：西子灣海景沙灘會館)	

十月十五日

日期/時間	演講人	主題
	主持人：顧記華 教授、黃聰龍 教授	
08 : 40～09 : 10	陳慶士 教授 (中央研究院，台北)	Targeting Phenotypic Adaptation of Cancer Cells to Tumor Microenvironment: Challenges and Opportunities
09 : 10～09 : 40	沈家寧 教授 (中央研究院，台北)	Development of Anti-cancer Strategies for Pancreatic Ductal Adenocarcinoma via Targeting Unique Metabolic Features of Cancer Stem Cells
09 : 40～10 : 10	陳海峰教授 (廈門大學，廈門)	Disease Related Signaling Pathway Based Bioactive Compounds Discovery from TCM.
10 : 10～10 : 40	Coffee Break	
	主持人：吳永昌 教授、簡伯武 教授	
10 : 30～11 : 50	蔡少正 司長 (科技部 生科司)	生科司計畫說明、座談
11 : 50～13 : 30	午餐	
	壁報論文	
	主持人：王升陽 教授、李美賢 教授	
13 : 30～13 : 50	沈雅敬 教授 (台灣大學，台北)	Recent Studies on Natural Products as Sources of New Lead Compounds with Potential Antitumor and Anti-inflammatory Activities
13 : 50～14 : 10	王靜瓊 教授 (台北醫學大學，台北)	The Effects of Si-Wu Tang on Stimulated Follicle Maturation
14 : 10～14 : 30	翁靖如 教授 (中山大學，高雄)	Triterpenoids from Wild Bitter Gourd Induce Apoptosis and Autophagy in Breast Cancer Cells
14 : 30～14 : 50	梁碧惠 教授 (台灣大學，台北)	Synthesis and Modification of Saponins and Glycolipids
14 : 50～15 : 10	洪欣儀 教授 (成功大學，台南)	Studies on Constitutive Androstane Receptor Activation of *Artemisia capillaris* and Coumarin Derivatives
15 : 10～16 : 00	Coffee break	
	主持人：鍾景光 教授、吳介信 教授	

16 : 00～16 : 20	洪啟峰 教授 (輔仁大學，新北市)	The Research and Development of Chinese Herbal Medicine Used for the Treatment of Aging and Disease in Skin and Eyes
16 : 20～16 : 40	許雅玲 教授 (高雄醫學大學，高雄)	Novel Mechanisms and Approaches in the Drug Development of Cancers by Targeting Tumor Microenvironment
16 : 40～17 : 00	呂美津 教授 (東華大學，屏東)	Antileukemic Scalarane Sesterterpenoids and Meroditerpenoid from *Carteriospongia* (*Phyllospongia*) sp., Induce Apoptosis via Dual Inhibitory Effects on Topoisomerase II and Hsp90
17 : 00～17 : 30	壁報論文頒獎 與 閉幕典禮	
17 : 30～	賦歸	

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特邀演講者
Keynote speakers

李國雄 院士

Dr. Kuo-Hsiung Lee

Position Title: Kenan Distinguished Professor of Medicinal Chemistry
Director of Natural Products Research Laboratories
University of North Carolina at Chapel Hill (UNC)
Academician of Academia Sinica

EDUCATION:

Institution and Location	*Degree*	*Year Conferred*	*Field of Study*
Kaohsiung Medical University (Taiwan)	B.S.	1961	Pharmacy
Kyoto University (Japan)	M.S.	1965	Pharmaceutical Chemistry
University of Minnesota (Minneapolis)	Ph.D.	1968	Medicinal Chemistry
University of California (Los Angeles)	Postdoctoral Scholar	1968-70	Organic Chemistry

EMPLOYMENT:

1970-1974	Assistant Professor of Medicinal Chemistry, UNC
1974-1977	Associate Professor of Medicinal Chemistry, UNC
1977-1991	Professor of Medicinal Chemistry, UNC
1998-1999	Chair, Division of Medicinal Chemistry and Natural Products, UNC
1983-present	Director of Natural Products Research Laboratories, UNC
1992-present	Kenan Distinguished Professor of Medicinal Chemistry, UNC

AWARDS:

1. First Lifu Academic Award for Chinese Medicine 1994
2. Academician of Academia Sinica 1996
3. Outstanding Achievement Award, University of Minnesota 1999
4. Taiwanese-American Foundation Achievement Award in Science & Engineering 2003
5. Kitasato Microbial Chemistry Medal, Japan 2005
6. American Society of Pharmacognosy Norman R. Farnsworth Research Achievement Award 2009
7. Order of the Rising Sun, Gold Rays with Neck Ribbon from the government of Japan 2011
8. China 100 Distinguished Alumni Award from University of Minnesota *out of 10,000 Chinese alumni* 2014
9. American Association of College of Pharmacy Ernest H. Volwiler Research Achievement Award, 2015
10. Third Cheung On Tak International Award for Outstanding Contribution to Chinese Medicine, Hong Kong Baptist University, 2016

HONORS:

1. Member, The Tang Prize in Biopharmaceutical Science Selection Committee, Academia Sinica 2014-2016
2. Fellow, American Association of Pharmaceutical Scientists (1986)
3. Fellow, American Association for the Advancement of Science (1994)
4. Fellow, American Society of Pharmacognosy (2010)
5. Chair Professor and Honorary Director of the Chinese Medicine Research and Development Center, China Medical University and Hospital, Taiwan 2010-present
6. Chair Professor, College of Pharmacy, Kaohsiung Medical University, Taiwan 2011-present

CURRENT RESEARCH PROGRAMS:

Medicinal Chemistry, Bioactive Natural Products, New Drug Discovery and Development, and Chinese Medicine

Modern Drug Discovery and Development Based on Ancient Chinese Herbal Medicine

Kuo-Hsiung Lee

Kenan Distinguished Professor of Medicinal Chemistry, Director of Natural Products Research Laboratories (NPRL)
Eshelman School of Pharmacy, University of North Carolina at Chapel Hill
Academician of Academia Sinica, Taiwan
Chair Professor & Honorary Director, Chinese Medicine Research & Development Center, China Medical University & Hospital
Chair Professor, Kaohsiung Medical University

Chinese Herbal Medicine (CHM) has been used since ancient times by generations of Chinese peoples to treat human illness, which makes CHM the best source for modern drug discovery and development. The combination of advanced medicinal chemistry and natural products chemistry coupled with cutting-edge life science technology will continue to play a very important role in efficiently and effectively converting CHM products, especially the pure single active principles, through modification and synthesis into clinical trial candidates. Elucidation of the mechanism of action of active principles and active fractions, as well as effective and safe formulas, will be important in the development of such world-class new drugs.

Development of CHM products as new standardized botanical drugs for treating chronic diseases or health maintenance is another strategy for modern drug discovery. Construction of very strong research teams composed of top-notch synthetic medicinal chemists, natural products chemists and life science biomedical scientists with ample funding support is absolutely needed for the efficient and effective discovery and development of world-class botanical drugs targeted at unmet medical needs. This lecture will review CHM-based products that are in clinical use, clinical trial, and preclinical development as well as selected examples from those several thousand active compounds already discovered by my NPRL research programs.

楊寧蓀 博士

Dr. Ning-Sun Yang

Title

Distinguished Research Fellow and professor
Agricultural Biotechnology Research Center
Academia Sinica, Nankang, Taipei, Taiwan

EDUCATION

1965~1969, B.S., Botany, National Taiwan University, Taipei, Taiwan
1970~1974, Ph.D., Biochemical Genetics Program, Michigan State University, USA
1974~1976, Postdoctoral Fellow, Roche Institute of Molecular Biology, USA

SPECIALTY

Transgenic Biotechnology
Cell-and Gene based Cancer Vaccines
Phytomedicine Research

RESEARCH AND/OR PROFESSIONAL EXPERIENCE

1965~1969, B.S., Botany, National Taiwan University, Taipei, Taiwan (today as College of Life Science)
1970~1974, Ph.D., AEC plant Res. Lab. Biochemical Genetics Program, Michigan State University, USA
1974~1976, Postdoctoral Fellow, Roche Institute of Molecular Biology, USA
1976~1982, Assistant/Associate Research Member and Laboratory Chief, Michigan Comprehensive Cancer Center/Michigan Cancer Foundation, Detroit, USA
1983~1990, Senior Scientist of Genetic Engineering, Cetus/Agracetus Inc., USA
1990~2000, Clinical Associate Professor, Adjunct Professor and Principle Investigator of UW Comprehensive Cancer Center (UWCCC), University of Wisconsin Medical School, Madison, Wisc. USA
1991~1997, Program Leader, Director, Cancer Gene Therapy, Agracetus/PowederJect Vaccine, Inc., USA
1997~2000, Principal Investigator, UW-Comprehensive Cancer Center, UW-Madison School of Medicine
1997~2006, Director and Distinguished Research Fellow, Institute of BioAgricultural Sciences, Preparatory Office Academia Sinica
1998~2004, Professor, College of Life Science, National Taiwan University, Taipei
2003~present, Professor, Taiwan International Graduate Program, Academia Sinica, Taipei
2006~present, Distinguished Research Fellow, Agricultural Biotechnology Research Center, Academia Sinica
2010~present, Professor, Institute of Biotechnology, National Taiwan University, Taiwan
2009~present, Distinguished Professor, Department of Life Science, National Central University, Taiwan
2005~present, Member of Board of Directors, Genovate Biotechnology Co., Ltd., Taiwan

HONORS, AWARDS, AND PROFESSIONAL ACTIVITIES

1993, “Fellow/Faculty” Award, W. R. Grace/Cetus, Madison, USA
1994~2004, Consultant Professor, Chinese National Medical Science College and United Medical College; and Institute of Genetics, Fudan University, People’s Rep. China
1995~1999, Foreign Advisor of the Human Gene Therapy Program, Chinese Academy of Medical Sciences, PRC
1997~present, Distinguished Research Fellow, Academia Sinica
1997~2003, Member Program Committee and/or Faculty of the American Society of Gene Therapy (ASGT), USA
2002~2004, Member of the Biology and Medicine Panel of Research Grants Council (RGC) of Hong Kong
2005, Advisory Board Member, Academic/Scientific Review Committee, International Centre for Chemical Sciences, University of Karachi, Karachi, Pakistan
2006~present, Fellow, American Association for the Advancement of Sciences (AAAS)
2010~2014, Academia Sinica Investigator Award
2008~present, Executive Council Member of CGCM
2013, Taiwan Healthcare and Agricultural Biotech Industries Innovation and Excellence Awards：Innovation Potential Award.
2014, Taiwan Healthcare and Agricultural Biotech Industries Innovation and Excellence Awards：Innovation Potential Award.

INVITED SPEAKER TO SYMPOSIUMS, SEMINARS AND LECTURES(2010-2015)

Selected Lectures and Seminars Delivered at International Conferences, Research Institutions and Universities

(2001-2015)

On Topics of

- **Gene gun technology and gene-based cancer vaccines**
- **Phytochemical Bio-activities of Shikonins, *Echinacea purpura* and Other Medicinal Plant Extracts.**
- **Anti-inflammatory and Anti-cancer Phytochemicals.**
- **Omics Approaches for Medicinal Phytochemical Research**
- **Multi-facet characteristics of TCM phytochemicalshikonin on Anti-inflammation, Tissue-wounding and Anti-tumor activities.**
- **Phytochemical-modified, DC-based cancer vaccines.**
- **The functional genomics approaches for medicinal plant research.**

Date	Conference	Role
2010/04	Institutional Seminar, City of Hope Medical Center (Duarte, USA)	Institutional Seminar
2010/05	Institutional Seminar, Mount Sinai School of Medicine (New York, USA)	Institutional Seminar
2010/05	Institutional Seminar, Albert Einstein College of Medicine (Bronx, USA)	Institutional Seminar
2010/05	Institutional Seminar, University of Wisconsin-Madison Clinical Science Center (Madison, USA)	Institutional Seminar
2010/06	2010 Across the strait Traditional Chinese Medicine: Development and Collaboration (Xiamen, China)	Invited Keynote Speaker
2010/07	Institutional Seminar, Shanghai Institutes for Biological Sciences, Chinese Academy of Sciences & Shanghai Jiao-Tong University School and Medicine (Shanghai, China)	Institutional Lectures
2010/08	58th International Congress and Annual Meeting of the society for Medicinal Plant Research (Berlin, Germany)	Invited Keylecture Speaker
2010/09	Institutional Seminar, University of Mainz (Mainz, Germany)	Institutional Seminar
2010/11	International Federation of Cell Biology: the 2nd IFCB International Training Program in Cell and Molecular Biology (Taipei, Taiwan)	Invited Speaker
2010/11	International Conference on Folk and Herbal Medicine (Udaipur, India)	Invited Keynote Speaker
2011/01	Institute of Basic Research in Clinical Medicine, China Academy of Chinese Medical Sciences (Beijing, China)	Institutional Seminar
2011/04	Institutional Seminar, Harvard University (Boston, USA)	Institutional Seminar
2011/07	Institutional Seminar, Plant Stress Genomics Research Center, King Abdullah University of Science and Technology (KAUST) (Thuwal, Kingdom of Saudi Arabia)	Institutional Seminar
2011/08	10th Meeting of Consortium for Globalization of Chinese Medicine (CGCM)(Shanghai, China)	Session Chairman
2011/09	2011 Herbal Product in Animal Health and Nutrition (HERBAN) (Antalya, Turkey)	Keynote Speaker
2011/12	The 50th Anniversary Meeting of the Phytochemical Society of North America (Hawaii, USA)	Invited Conference Speaker
2012/08	*Phytochemical Society of North America*. 51st Annual PSNA Meeting (London, Canada)	Invited Conference Speaker
2012/09	Department of Life Science, Tunghai University (Taichung, Taiwan)	Institutional Seminar
2012/10	College of Pharmacy, Taipei Medical University (Taipei, Taiwan)	Institutional Seminar

2013/03	WynLife Inc.(Taipei/Taichung/Kaohsiung, Taiwan)	Invited Speaker
2013/03	School of Life Sciences, Yang-Ming University (Taipei, Taiwan)	Institutional Seminar
2013/04	Institute of Medical Sciences, Tzu Chi University (Hualien, Taiwan)	Institutional Seminar
2013/08	Department for Molecular Biomedical Research, Gent University (Belgium)	Institutional Seminar
2013/08	12th Meeting of Consortium for Globalization of Chinese Medicine (CGCM)(Graz, Austria)	Session chairman & Invited Speaker
2013/11	International conference on Functional and Comparative Genomics and Pharmacogenomics (Chicago, USA)	Session chairman &Invited Conference Speaker
2013/12	Natural Products Research Institute, College of Pharmacy, Seoul National University (Seoul, South Korea)	Institutional Seminar
2013/12	44th Korean Society for Pharmacognosy Fall Symposium(Seoul, South Korea)	Invited Conference Speaker
2014/2	5th international conference on translational cancer research (New Delhi, India)	invited Conference Speaker
2014/08	The Immunotherapies and Vaccines Summit(Boston, USA)	Institutional Seminar
2014/08	2nd International Conference and Exhibition on Traditional & Alternative Medicine(Beijing, China)	Invited Conference Speaker
2014/08	13th CGCM Meeting (Beijing, China)	Session chairman
2014/11	12th Annual Congress of International Drug Discovery Science & Technology (IDDST-2014) (Suzhou, China)	Session chairman & Invited Conference Speaker
2015/04	North Eastern University, Dept. of Biology and Dept. of Chemistry (Boston, USA)	Institutional Speaker
2015/04	McLean Hospital, Harvard Medical School (Boston, USA)	Invited Speaker
2015/09	Mongolia Academy of Science, Inst. Of Biotech, chemical Engineering and National Mongolia University (Sukhbaatar, Mongolia)	InvitedSpeaker
2015/10	20th World Congress on Advances in Oncology and 18th International Symposium on Molecular Medicine (Athens, Greece)	Session chairman & Invited Conference Speaker
2015/10	2nd International Conference on Natural Products Utilization (Plovdiv, Bulgaria)	Session chairman & Invited Conference Speaker
2015-11	Inner Mongolia Agricultural University (Inner Mongolia, China)	InstitutionalSeminar Speaker

Molecular Targeting and Signaling Functions of Specific TCM Phytochemicals: Application to Inflammatory Diseases.

Ning-Sun Yang

Agricultural Biotechnology Research Center, Academia Sinica, Taipei

Abstract:

One unique problem for providing evidence-based scientific efficacy for TCM is often the lack of molecular target(s) and/or the related molecular signaling functions of the key mode of action(s)/function(s). Using three systems, including phytochemicals shikonin (SK), polyacetylene glycosides (F1) and LAW (luteolin, apigenin, wedelolactone) from commonly used TCM herbs in Taiwan, we evaluated the candidate signaling pathways, cellular immunological activities and/or protein target molecules that are likely involved in the anti-inflammatory and the associated anti-cancer or anti-colitis activities. Specifically, heterogeneous nuclear ribonucleoprotein A1 (hnRNP A1), granulocytic myeloid derived suppressor cells (gMDSC), and Th17/IL-17A cell/cytokine systems were revealed experimentally to represent the molecular/cellular functions and bioactivities of these TCM-derived phytochemicals. These findings were obtained by a combination of technologies employing the omics, cellular immunology and biochemistry approaches. Application of these findings to future development of evidence-based TCM will be contemplated.

創源生技
GGA

BIOVIA

ELSEVIER

創源生技．科學資訊事業

台灣1ST引進「全方位程序管理與合規系統(PMC)」
科學軟體代理・客製化整合・電腦確效服務
新藥開發好幫手・學研單位好夥伴

效率與合規

- 實驗室資訊管理系統：庫存、樣品規格、儀器調校、安定性測試、及環境監控管理
- 電子實驗記錄簿
- 實驗執行系統/批次記錄系統
- 製程分析與監控
- 工作流程設計、第三方工具整合、客製化功能
- 合規、品質、與文檔管理系統/合規電子文件提交系統

創新與研發

- 化合物合成設計/材料設計與模擬
- 生物標記及生物序列資料分析
- 代謝、活性、與毒性分析
- 生物路徑分析
- 基因體學、蛋白質體學、代謝體學及系統生物學
- 生命科學模擬
- 高速高通量藥物篩選

資料與知識

- 生物實體與化學物質註冊及分析管理系統
- 臨床試驗設計及結果預測與分析
- 化合物及化學反應資料庫
- 藥品、藥物基因體及藥動資料庫
- 文獻與專利搜尋工具與資料庫、文本檔案與化學資料採礦技術

邀請演講者
Invited speakers

錢培元 博士
Dr. Pei-Yuan Qian

UNIVERSITY EDUCATION:

Postdoc. University of British Columbia, Canada
Ph.D. University of Alberta, Canada
M.Sc. University of Xiamen, China
B.Sc. Ocean University of Qingdao, China

TEACHING & ADMINISTRATIVE EXPERIENCE:

2011- Chair Professor, Division of Life Science, HKUST
2004-2011 Professor, Department of Biology, HKUST
2002-2003 Acting Director, Environmental Science and Engineering Program (2002-2003)
2001- 2008 Director, Coastal Marine Laboratory, HKUST
2001-2002 Acting Director of AMCE
2001- 2008 Associate Director of Atmospheric, Marine and Coastal Environment Program, HKUST
2000- 2004 Associate Professor **(A)**, Department of Biology, HKUST
1998- 2000 Associate Professor **(B)**, Department of Biology, HKUST, Hong Kong.
1998-2001 Associate Director, Center for Coastal and Atmospheric Research, HKUST (1998-2001)
1995-2003 Associate Director of Msc. Env. Sci. and Engineering Program, HKUST (1995-2003)
1995-2003 Coordinator of Msc. Env. Sci. Program, School of Science, HKUST
1993-1997 Assistant Professor, Department of Biology, HKUST, Hong Kong.
1986-1990 Teaching Assistant, Department of Zoology, University of Alberta, Edmonton.

AWARDS & HONORS:

2013 **Chair,** Gordon Research Conference on Marine Molecular Ecology
Invited lecturer, 14th International Conference and 8th European Conference on Marine Natural Product
2011 **Distinguished Lecturer**, AOGS annual meeting 2011.
2009 **First Class Prize** of Science and Technology of Guangdong Province, 2008 (Diversity and production of marine organisms in South China Sea) – (the 2nd Author)
2008 Nominated for International Cooperation Award in Science and Technology, Chinese Academy of Sciences
Nominated for Senior Croucher Research Fellowship by HKUST
2007 Nominated of KAUST Investigator by HKUST
2006 Best Paper Award, Benthic Ecology Meeting, Quebec, Canada
Nominated for Senior Croucher Research Fellowship by HKUST
2005 Bamfield Marine Science Center Visiting Scientist Award, Canada
Best Paper Award, The 13th International Crestacean Conference, UK
2004 Best poster presentation, the 6th International Larval Biology Conference
2003 Nominated for Senior Croucher Research Fellowship by HKUST
2002 School of Science Teaching Award
Nominated for Senior Croucher Research Fellowship by HKUST
2001 Teaching Innovation Award, HKUST
2000 APRU Fellowship
1998 Extra Merit Increase for outstanding performance awarded by the president of HKUST
Honorary Prof., Institute of Oceanology, Chinese Academy of Science
1997- Adjunct professor, Ocean University of Qingdao, Qingdao, PRC
Honorary Council member of the Science & Technology Commission of Qingdao Government, PRC

KEY APPOINTMENTS

Chair Professor, Division of Life Science, HKUST

Member of University Council (2011-)
Member of University Court (2013 -)
Senate member, HKUST (2011-)
Director, Environmental Science Programs, HKUST
Chairman, Executive Committee for Environmental Science Programs, HKUST
Associate Head, Division of Life Science (2011-2012)
Executive Committee Member, Division of Life Science (2011-)
Deputy Chair of Advisory Committee, State Key Laboratory of Tropical Ocean Dynamics
Chairman: Departmental Academic Review and Substantional Committee (2008-2010)
Chairman: Departmental Merit Review Committee (2008-2010)
Chairman: Departmental Faculty Recruitment Committee (2008-2010)
Chairman: Faculty Recruitment Committee of AMCE (2002-2007)
Senate member, HKUST (2002-2005)
Elected Council member, Chinese Society of Oceanography
Elected Council member, Asia-Pacific Chemical Ecology Society
Founding President, Pacific Institutes of Marine Sciences (2002-2007)
Board of Directors, Pacific Institutes of Marine Sciences (2002-)
Founding Director, Coastal Marine Laboratory, HKUST (2001-2008)
Acting Director of Atmospheric, Marine and Coastal Environment Program, HKUST (2001-2003)
Associate Director of Atmospheric, Marine and Coastal Environment Program, HKUST (2001-2008)
Panel Member, Ocean Science Division, NSFC (2008-)
Panel Member, NSFC/RGC Joint Research Selection Committee (2007-)
Panel Member of Biology and Medicine, Research Grant Council of HKSAR (2006-2012)
Overseas Panel Member (ocean sciences), Natural Science Foundation of China (2001-2005)
Team leader, Overseas Innovative Partnership Program, South China Sea Institute of Oceanography, Chinese Academy of Sciences
Elected Council Member, China Ocean Mineral Resources Research and Development Association
National Project Coordinator joinly appointed by Chinese Government and UNDP for the project on "Biodiversity Conservation and Management on the Coastal Areas of China's Southeast Sea" funded by Global Environmental Facility/United Nation Development Program
Associate Director, Center for Coastal and Atmospheric Research, (1998-2002), HKUST
Founding director (coordinator), MSc. Env. Sci. Program (1996-2005), HKUST
Acting Director, Msc. Env. Sci. & Eng. Prog. (2003-2004), HKUST
Deputy Director, MSc. Env. Sci. and Eng. Program (1996-2005), HKUST
Advisory Committee Member, CAS Key Laboratory of Tropical Ocean Ecosystem Dynamics
Advisory Committee Member, CAS Key lab of Sustainable Marine Resource Utilization, Guangzhou,
Advisory Committee Member, SOA Key Laboratory of Deepsea Genomic Resources, Xiamen
Chief Examiner/Co-Setter of Hong Kong Examination Authority, Hong Kong (1998-2006)
Guest Professor & PG supervisor, Institute of Oceanography, Academy of Science, China
Adjunct Professor, South China Sea Institute of Oceanography, CAS, Guangzhou
Adjunct professor, Ocean University of China, Qingdao, China
Adjunct Professor & PG supervisor, First Institute of Oceanology, SOA, Qingdao
Adjunct Professor & PG supervisor, Second Institute of Oceanography, SOA, Hangzhou
Adjunct Professor, The Third Institute of Oceanology, SOA, Xiamen
Adjunct Professor, Yangzhou University, Yangzhou
Adjunct Professor, Zhejiang Univeristy (2009-2012)
Adjunct Professor, Shanghai Ocean University

EDITORAL SERVICES

Chief Editor, Frontier in Marine Molecular Ecology (2013 -)
Contributing Editor, Marine Ecology Progress Series (since 2005-)
Editor, Scientific Report
Editor, Biofouling
Editor, Marine Drugs
Editor, PeerJ

Editor, J of Marine Biology
Associate Editor, Journal of Integrated –OMICS (JIOMICS (2010-)
Editor, Journal of Natural Resources (2010-)
Editor, World J Biological Chemistry (2010-)
Review Editor**,** Marine Ecology Progress Series (1996-2005)
Member of Editorial Board, J. Experimental Marine Biology and Ecology (International journal)
Member of Editorial Board, J. Marine Science and Engineering
Member of Editorial Board, Invertebrate Zoology (1998-2003) (International journal)
Member of Editorial Board, Endangered Species Research (International journal)
Member of Editorial Board, Open Microbiology Journal (2008 - present)
Member of Editorial Board, Oceanography - JCR (2007 – present)
Member of Editorial Board, Tropical Oceans (1999-)
Member of Editorial Board, J. Chin. Liminol. Oceanol. (Chinese edition) (2001-)
Member of Editorial Board, J. Chin. Liminol. Oceanol. (English edition) (1997-)
Member of Editorial Board, Acta Oceanologia Sinica, (English edition) (2012-)
Member of Editorial Board, Acta Oceanologia Sinica, (Chinese edition) (2012-)

Manipulation of biosynthesis pathways as a tool for bioactive compound discovery: a story of colibactin

Pei-Yuan Qian

Division of Life Science and Environmental Science Programs, Hong Kong University of Science and Technology, Hong Kong SAR

The cryptic natural product colibactin represents a human gut bacterial genotoxin that remains structurally undefined after a decade since its discovery. The biosynthetic gene cluster of colibactin (*clb*) was identified as a ~54 kb *pks* island.*E. coli* strains harboring *clb* gene cluster (clb^+) can cause mammalian DNA damage, induce cellular senescence and cell cycle arrest, increase intestinal permeability, alter host immunity, and thus enhance tumor initiation and progression in animal models of colorectal cancer. Intriguingly, the colibactin biosynthetic gene cluster is widely distributed not only in pathogenic but also probiotic human enterobacteria, suggesting important and diverse roles of colibactin in human health. Despite the significance of biological functions of colibactin, its unidentified chemical structure seriously hindered the further understanding of its effectson human health.Previous attempts worldwide to directly isolate *clb* pathway products using traditional wayhave so far been unsuccessful. We performed extensive metabolomics analysis of *Escherichia coli* in search for colibactingenotoxin through transformation-associated recombination cloning technique, extensive mutagenesis, and large scale fermentation. We successfully discovered and elucidated the chemical structure of several precolibactins, including the largest and most complete precolibactin-886 of colibactin family isolated and characterized to date. This molecule uniquely incorporates the highly sought genotoxicity-associated aminomalonate building block in its unprecedented macrocyclic structure.The individual gene inactivation study indicated that the introduction of the aminomalonate unit to precolibactin-886 is catalyzed by the modular polyketide synthase ClbKpks, which had been speculated to be biochemically skipped in the colibactin assembly line. Thus, we uncovered a divergent colibactin biosynthesis pathway and revised the previous hypothesis in colibactin biosynthesis. We thus provided new insights into the molecular basis and mode of action of this colorectal cancer-linked human gut bacterial genotoxin.

This project is generously supported by the 13.5 program of the China Ocean Mineral Resources Research and Development Associationgranted to Prof Qian.

淺川義範 博士
Dr. Yoshinori Asakawa

EDUCATION

1960-1964	DEPARTMENT OF BIOLOGY, TOKUSHIMA UNIVERSITY（BSC QUALIFICATION）
1964-1969	DEPARTMENT OF CHEMISTRY, HIROSHIMA UNIVERSITY (MASTER AND DOCTOR COURSES)
1972	PH.D. AT HIROSHIMAUNIVERSITY

CAREER

1969-1976	Assistant professor, Department of Chemistry, Hiroshima University
1972-1974	Postdoctoral Fellow, Université Louis Pasteur, France (Prof. Guy Ourisson)
1976-1980	Associate Professor, TBU
1981 -	Full Professor of Faculty of Pharmaceutical Sciences, TBU
1986-1989	Dean, Faculty of Pharmaceutical Sciences, TBU
2000-2003	Dean, Faculty of Pharmaceutical Sciences, TBU
1986-	Director, Institute of Pharmacognosy, TBU

INTERNATIONAL AWARDS

1983	1st Hedwig Medal (International Association of Bryologists)
1997	International Phytochemistry Prize and Certificate (Elsevier)
2004	International Symposium on Essential Oil (ISEO) Award
2005	Tucuman University Award (Argentina)
2009	Jack Cannon Gold Medal Award(Malaysian Natural Product Society)
2011	Medical University of Lublin Gold Medal (Poland)
2012	Doctor Honoris Causa (Medical University of Lublin, Poland)
2012	Honorary Professor (Amity University, India)
2012	Fellow (FNSE): The National Society of Ethnopharmacology, India
2013	Polish Pharmacy Embassy Certificate
2014	**Gusi International Peace Prize**(Gusi Int. Peace Prize Foudation)

DOMESTIC AWARDS

1997	Tokushima News Paper Award (Science)
1984	Matsuura Award, Hiroshima University (Department of Chemistry)
1998	Matsuura Award, Hiroshima University (Department of Chemistry)
2005	Matsuura Award, Hiroshima University (Department of Chemistry)
2011	**Japanese Society of Pharmacognosy Award**

INTERNATIONAL AWARDS

1983	1st Hedwig Medal (International Association of Bryologists)
1997	International Phytochemistry Prize and Certificate (Elsevier)
2004	International Symposium on Essential Oil (ISEO) Award
2005	Tucuman University Award (Argentina)
2009	Jack Cannon Gold Medal Award(Malaysian Natural Product Society)
2011	Medical University of Lublin Gold Medal (Poland)
2012	Doctor Honoris Causa (Medical University of Lublin, Poland)
2012	Honorary Professor (Amity University, India)
2012	Fellow (FNSE): The National Society of Ethnopharmacology, India
2013	Polish Pharmacy Embassy Certificate
2014	**Gusi International Peace Prize**(Gusi Int. Peace Prize Foudation)

DOMESTIC AWARDS

1997 Tokushima News Paper Award (Science)
1984 Matsuura Award, Hiroshima University (Department of Chemistry)
1998 Matsuura Award, Hiroshima University (Department of Chemistry)
2005 Matsuura Award, Hiroshima University (Department of Chemistry)
2011 **Japanese Society of Pharmacognosy Award**

EDITORSHIPS AND ACTIVITIES

Current Chemical Biology(associate editor)
Phytomedicine (former Editor/co-editor),
Spectroscopy (former Editor)
Planta Medica (former Editorial Board)

EDITORIAL BOARD

Arkivoc
Asian Coordinating Group for Chemistry,
Bryology Research
Fitoterapia
Flavour and Fragrance Journal
Journal of Natural Products
Journal of Natural Volatiles and Essential Oils (NVEO)
Journal of Traditional &Complementary Medicine (JTCM)
Malaysian Journal of Sciences
Medicinal Plants in Poland and in the World
Medicinal and Aromatic Plants Abstracts
Medicinal and Aromatic Plants
Natural Product Communications
Natural Product Research
Open Cell Development & Biology
Phytochemistry
Phytochemistry Letters
Phytomedicine
Recent Research Developments in Phytochemistry
Scientia Pharmaceutica
Spectroscopy

HONORARY ADVISORY BOARD

Planta Medica

SOCIETY ACTIVITIES

1977- Councilor member, The Chemistry ofTerpenes, Essential Oils and Aromatics (TEAC)
2000- Permanent Member of International Symposium on Essential Oils (ISEO)
2000-2002: President, Japanese Bryological Society
2007- President, Phytochemical Society of Asia (PSA)http://phytochemsoc-asia.com/
2015- President, Terpenes, Essential Oils and Aromatics (TEAC)

SYMPOSIA:

1988: IUPAC International symposium on Natural Product chemistry (Pre-symposium) (Chairperson)
1988: UNESCO Asian regional symposium (Chairperson)
1993: International Botanical Congress (Post-symposium) (Chairperson)
1996: Symposium on Oceanian-Japanese Organic Chemistry (Chairperson)
2002: International Symposium on the Chemistry of Essential Oils, Terpenes and Aromatics(Chairperson)
2006: Mini symposium on Phytochemistry (Chairperson)
2010: Annual Meeting of Japanese Society of Pharmacognosy (Chairperson)

2010: 5th Japanese, Chinese and Korean Joint Symposium on Pharmacognosy (Chairperson)
2015: Inaugural Symposium of Phytochemical Society of Asia (PSA)2015Tokushima (Chairperson)
2016: International Symposium on Natural Products for the Future 2016 Tokushima (Chairperson)

RESEARCH INTEREST
Isolation and structure elucidation of bioactive secondary metabolites of bryophytes, pteridophytes, inedible mushrooms; medicinal and aromatic plants and insects and their bioassay; Biotransformation of secondary metabolites by fungi and mammals, total synthesis of natural products, chemical reaction of organic per-acids, chemical phylogeny of spore-forming plants.

Scientific publication: Original papers: 670, Books: 38(Progress in the Chemistry of Organic Natural Products. Vol. 42,1-285 1982, Vol.65, 1-618, 1995, Vol. 95, 1-796, 2013, Springer, Vienna & New York) etc.

Lectures: International Opening, Closing, Plenary and invited lectures:
Argentina, Australia, Austria, Botswana, Bulgaria, Canada, China, Czech, France, Finland, Germany, Greece, Hungary, India, Indonesia, Italy, Japan, Korea, Madagascar, Malaysia, Mexico, Morocco, Nepal, Netherlands, New Zealand, New Caledonia, Pakistan, Poland, Portugal, Spain, Suisse, Taiwan, Tahiti, Turkey, UK, US etc

Post-doc invitation:**50**post docs from Argentina, Egypt, France, Germany, India, Indonesia, Italy, Morocco, Madagascar, Malaysia, Myanmar, New Caledonia, Kenya, Poland, Scotland, Serbia, Taiwan, Thailand, Turkey, Vietnam

Foreign students (Master and Ph. D.): Argentina (3), Austria (6), Chili (1), China (1), Indonesia (8),Italy (1), Malaysia (5), New Caledonia (3), Taiwan (1), Serbia (1), Vietnam (1).

Sabbatical Profs: England (2), Italy (1), Germany (1), Indonesia (2), French Polynesia (2), Malaysia (2). USA (1)

Visiting Profs.: More than 60 from the world.

Highlights in Phytochemistry of Bryophytes: Chemical Diversity, Biological Activity and Chemosystematics

Yoshinori Asakawa
Faculty of Pharmaceutical Sciences, Tokushima Bunri University, Yamashiro-cho, Tokushima 770-8514, Japan: asakawa@ph.bunri-u.ac.jp

Over several hundred new organic compounds have been isolated from the liverworts (Figs. 1 and 2) and more than 40 new carbon skeletal terpenoids and aromatic compounds found in this class. Most of liverworts elaborate characteristic odiferous, pungent and bitter tasting compounds many of which show, antimicrobial, antifungal, antiviral, allergenic contact dermatitis, cytotoxic, insecticidal, anti-HIV, superoxide anion radical release, plant growth regulatory, neurotrophic, NO production inhibitory, muscle relaxing, antiobesity, piscicidal and nematocidal activity.

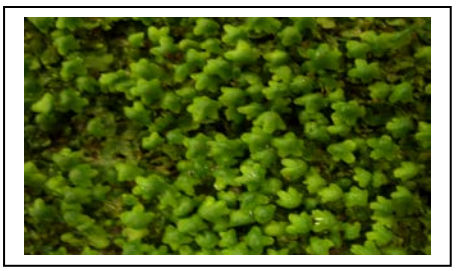
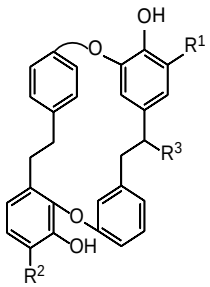


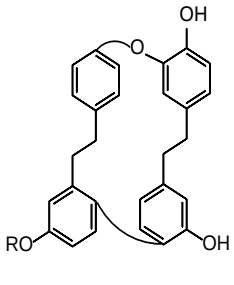
Fig. 1.*Pellia endiviifolia*

Fig. 2.*Marchantia polymorpha*

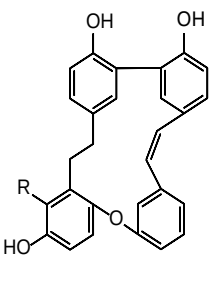
Marchantins [Marchantin A (**1**),C (**2**)], riccardin [riccardin C (**3,4**)], isoplagiochin (**5,6**) and perrottetin (**7,8**) series and the other bis-bibenzyls which are isolated from the liverworts, (Fig. 1,2) and *M. paleacea*var. *diptera*, *Riccardia*, *Reboulia*, and *Radula s*pecies showed cytotoxic, anti-HIV and anti-influenza, antitumor activity and muscle relaxing activity. The present paper concerns with the biologically active terpenoids and bis-bibenzyls from liverworts. The present paper includes chemical diversity, biological activity and chemosystematics of liverworts [1-3].



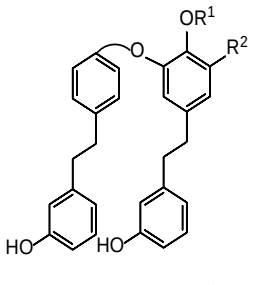
1: Marchantin A: R^1=OH; $R^{2=}R^{3=}$H
2: Marchantin C: R^1=$R^{2=}R^{3=}$H



3: Riccardin A: R=Me
4: Riccardin C: R=H



5: Isoplagochin A: R=H
6: Isoplagiochin B: R=OH



7: Perrottetin E: R^1=R^2=H
8: Perrottettin F: R^1=H; R^2=OH

[1] Asakawa, Y.(**1982**) *Progress in the Chemistry of Organic Natural Products.* 42, 1-285.
[2] Asakawa, Y. (**1995**) *Progress in the Chemistry of Organic Natural Products.* 65, 1-618.
[3] Asakawa, Y. Ludwiczuk, A, Nagashima, F. (**2013**) *Progress in the Chemistry of Organic Natural Products.* 95, 1-796.

Dr. Doralyn S. Dalisay

EDUCATION AND RESEARCH TRAINING

START MONTH/YEAR	END MONTH/YEAR	DEGREE *(if applicable)*	INSTITUTION AND LOCATION	TRAINING MENTOR	SCIENTIFIC DISCIPLINE
08/2005	07/2009	Postdoc	University of California, San Diego	Prof. Tadeusz "Ted" F. Molinski	Marine invertebrates natural products
06/2004	07/2005	Postdoc	University of California, Davis	Prof. Tadeusz "Ted" F. Molinski	chemistry
02/2001	05/2004	PhD Microbiology	University of New South Wales, Sydney, Sydney Australia	Prof. Staffan Kjelleberg	Marine invertebrates natural products chemistry Marine microbiology, Biofilms, biofouling
06/1996	04/2000	MS Bio Major in Microbiolgy	University of the Philippines in the Visayas	Prof. Relicardo Coloso	Marine microbiology
06/1989	04/1993	BS Pharmacy	University of San Agustin,	Prof. Gilda Rivero	Pharmacy

RESEARCH INTERESTS AND EXPERTISE

- Microbial, Marine Invertebrate, and Plant Natural Products Chemistry - discovery and characterization of anticancer and antimicrobial compounds
- MALDI Mass Spectrometry Imaging (Plant and Microbe)
- Microbial Chemical Biology - development of techniques for isolation of novel microorganisms from marine sediments environments as sources of drug leads; induction of secondary metabolite production through biochemical and genetic approaches; development and optimization of media for fermentation to increase secondary metabolites production
- Microbial diversity in marine sediments - Diversity, Biogeography distribution, and molecular evolution of marine microorganisms
- Microbe-marine plants/invertebrates interactions
- Elucidation of the mechanism of action (MOA) of marine antimicrobial compounds

PROFESSIONAL EXPERIENCE

START MONTH/YEAR	END MONTH/ YEAR	POSITION TITLE	DEPARTMENT	INSTITUTION AND LOCATION
06/2015	Present	Asst. Professor	Pharmacy	University of San Agustin, Iloilo City, Philippines
09/2012	05/2015	Asst. Research Professor	Institute of Biological Chemistry	Washington State University, Pullman, WA
08/2009	08/2012	Research Associate	Department of Chemistry	University of British Columbia, Vancouver, Canada
10/1993	01/2001	Lecturer	Pharmacy	University of San Agustin, Iloilo City, Philippines

HONORS AND AWARDS

May 2016	Philippine Pharmacists Association – The Outstanding Pharmacist, TOP Award in Research
July 2015	University of San Agustin, Alumni Achievement Award in Medicine and Health June 2015 Department of Science and Technology, DOST Balik Scientist Awardee
Sept 2003	Becton Dickenson Student Prize Award in Microbiology, State of New South Wales, Australia
Feb 2001	AusAID Scholar - Australian Agency for International Development/Australian, Development Scholarship (AusAID/ADS) (Merit/Equity Category),2001-2003
April 1993	Cum Laude, BS Pharmacy, University of San Agustin,Philippines
April 1993	10 Most Outstanding Student Leaders in the Western Visayas, Department of Education, Philippines, 1993
April 1993	Award for Academic Excellence, Philippine Association of Colleges of Pharmacy April
1993	Award for Community Service, Philippine Association of Colleges of Pharmacy

SERVICE TO ACADEMIC COMMUNITY

- Academic Editor
  - PLOS ONE (Public Library of Science) since 2014
  - International Journal of BioAnalytical Methods & BioEquivalence Studies since 2015
- Peer-referred journal reviewer
  - Phytochemistry since 2012
  - Journal of Natural Products since 2012
  - Marine Drugs since 2012
  - Recent Advances to Phytochemistry since 2012
  - Scientific Reports since 2012

ORAL PRESENTATIONS (Invited Lectures)

- 7th Asia Pacific Biotechnology Congress and 45th Philippine Society for Microbiology Annual Convention (Plenary Speaker) last July 21-23, 2016 at Vigan Convention Center, Ilocos Norte, Philippines.
- 2016 PPhA National Convention on the topic "Harnessing Pharmaceutical Sciences to Prevent and Treat Illnesses" (Plenary Speaker) at The Waterfront Hotel in Lahug, Cebu City, May 27, 2016.
- Annual Scientific Conference and 13th General Membership Assembly of the NRCP Visayas Regional Cluster (Resource Speaker), University of San Jose Recoletos, Cebu City, May 23, 2016.
- St. Paul University System: Facing Global Challenges through Dynamic Research (Plenary Speaker). St. Paul University, Iloilo, April 20, 2016.
- Academia Sinica, Taipei, Taiwan, (Seminar Speaker) April 8, 2016.
- National Academy of Science and Technology, NAST: 40 Years in Pursuit of Excellence Symposium for the Youth, Philippine Science High School Western Visayas, February 23, 2016.
- 4th Philippine Pharmacy Summit, Bayanihan Center, Pasig, Philippines, February 21, 2016
- 20th Natural Products Society of the Philippines National Convention, University of Santo

Tomas, Manila, December 1-2, 2015.

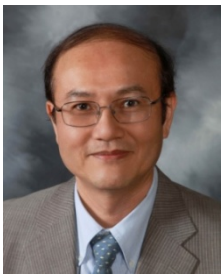
- 1st National Balik Scientist Convention, Department of Science and Technology, Makati, Philippines, November 27, 2015.
- Fisheries Biotechnology Symposium, 11th National Biotechnology Week, Dasmarinas, Cavite, November 26, 2015
- Department of Science and Technology, Region IVb (MIMAROPA) Health Research And Development Consortium, DOST-STII, Bicutan, Taguig, Metro Manila, October 27-28, 2015
- Philippine Society for Microbiology, Inc. Visayas Annual Meeting and Regional Scientific Convention, October 15-16, 2015, West Visayas State University, Iloilo City (*Keynote Speaker*)
- Department of Science and Technology, Philippine Council for Health Research and Development: Information and Education Campaign on Balik Scientist Program and Workshop on Effective Scientific Writing, October 1-2, 2015 (*Invited Speaker*)
- Carlos Hilado Memorial State College, July 24-25, Talisay, Negros Occidental *(Invited Speaker).*
- American Chemical Society 249th National Meeting, Denver, Colorado, March 23, 2015. *(Invited Speaker).*
- Biolomolecular Sciences Program, Boise State University, Boise, Idaho, February 4, 2015. *(Invited Speaker).*
- Department of Chemistry, De La Salle University, Manila, Philippines, August 15, 2014. *(Invited Speaker).*
- University of San Agustin, Iloilo City, Philippines, Aug 4, 2014. *(Invited Speaker).*
- Gifu Pharmaceutical University, Gifu, Japan, July 28, 2014. *(Invited Speaker).*
- Department of Chemistry, New Jersey City University, Jersey City, NJ, USA, June 30, 2014. *(Invited Speaker).*
- Research Center for Natural and Applied Sciences. University of Santo Tomas, España, Manila, Philippines, January 17, 2014. *(Invited Speaker).*
- Philippine Center for Postharvest Development and Mechanization. Muñoz, Nueva Ecija, Philippines, January 16, 2014. *(Invited Speaker).*
- Phytochemical Society of North America 52nd Annual Meeting. Corvallis, OR, USA, August 3-7, 2013. *(Invited Speaker).*
- American Society for Mass Spectrometry 2013 Water's Users Meeting, Minneapolis Marriot City Center, MN, USA, June 8, 2013. *(Invited Speaker).*
- Department of Chemistry, University of Prince Edward Island, Prince Edward Island, Canada, February 6, 2012. *(Invited Speaker).*
- Bigelow Laboratory for Ocean Sciences, Boothbay, ME, USA, January 23, 2012. *(Invited Speaker).*
- Natural Products Affinity Group (NPAG), University of California San Diego and Scripps Institute of Oceanography (SIO), San Diego, CA, USA, October 17, 2008. *(Invited Speaker).*
- Gordon Research Conference: Marine Natural Products, Ventura, CA, USA, Feb 24-29, 2008. *(Invited Speaker).*
- American Society of Pharmacognosy Conference, Corvallis, OR, USA, July 23-27, 2005
- Philippine Society for Microbiology 11th Annual Meeting and Regional Scientific Convention "Advancing the Frontiers of Microbiology and Biotechnology", Cebu Holiday Plaza Hotel, Cebu City , Philippines, 23-24 October 2003.
- 25th Annual Scientific Convention of the Philippine Society for Biochemistry and Molecular Biology PhilRice, Maligaya, Muñoz, Nueva Ecija, Philippines. December 9-11, 1999.
- Fourth Symposium on Diseases in Asian Aquaculture, Cebu International Convention Center, Cebu City, Philippines, November 22-26, 1999.

Natural Products Localization in Intact Plant Tissue by High Resolution MALDI Mass Spectometry Imaging

Doralyn S. Dalisay

Department of Pharmacy, College of Health and Allied Medical Professions
University of San Agustin, Gen. Luna St., Iloilo City, Philippines

Plant Natural Products (NPs) display "enriched" biological activities that are historically exploited by society as pharmaceuticals, antibiotics, intermediate chemicals, natraceuticals and chemical probes. Some are efficacious in treating diseases (e.g., cancer, pain, malaria, glaucoma) while some function as chemical scaffold leads for drug discovery efforts. Plant NP's are often structurally complex, are available only in minute quantities, and are not economically feasible via chemical synthesis. This problem is further compounded by the lack of knowledge about their biosynthesis and warrants an in-depth analysis for their unambiguous identification and structural characterization as well as identification of their spatial location in intact tissue sections. Described herein is the use of "state-of-the-art" high spatial resolution MALDI- mass spectrometry imaging to identify and characterize the specialized cells/tissues accumulating important plant phytochemicals. This enabling technology allows us to now rapidly identify their spatial (cell types involved) and temporal distributions, as well as the range of metabolites that co-exist in these specific cell types.



陳慶士 博士
Dr. Ching-Shih Chen

EDUCATION ANDTRAINING：
1974 - 1978 B.S., Agricultural Chemistry, National Taiwan University
1978 - 1980 M.S., Institute of Biochemical Sciences, National Taiwan University
1980 - 1985 Ph.D.; 1986 – 1986 Postdoc, Pharmaceutical Sciences, University of Wisconsin

POSITIONS AND EMPLOYMENT：
1987 - 1991 Assist. Prof.; 1991 – 1995, Assoc. Prof., Pharmacognosy, U. of Rhode Island
1995 - 1998 Assoc. Prof.; 1998 - 2001 Professor, Pharmaceutical Sciences, U. of Kentucky
2001 - 2014 Professor, Medicinal Chemistry, Internal Medicine& Urology, Ohio State U.
2014 –Distinguished Research Fellow & Director, Institute of Biol. Chem., Academia Sinica

AWARDS and HONORS：
Ohio State University Medical Center: Lucius A. Wing Chair of Cancer Research and Therapy (2004 - present), Inaugural Innovator of the Year Award (2010), Distinguished University Scholar Award (2010), Innovation in Drug Discovery Award (2008), College of Pharmacy Kimberly Chair Professorship (2003 – 2006)
National Academy of Inventors elected fellow (2014), Hearst Foundation Award (2008), Prostate Cancer Foundation Award (2007, 2008), American Association for the Advancement of Science elected fellow (2004), The V Foundation-AACR Translational Cancer Research award (2004), National Institutes of Health Shannon Award (1994)

RESEARCH INTERESTS： Chemical Biology/Medicinal Chemistry; Cancer Biology; Drug Discovery

Targeting Phenotypic Adaptation of Cancer Cells to Tumor Microenvironment: Challenges and Opportunities

Ching-Shih Chen (陳慶士)

Institute of Biological Chemistry, Academia Sinica, Taipei, Taiwan

The paradigm shift in drug discovery toward a target-based approach in the past decade has made a tremendous headway in developing new therapeutic agents targeting different clinically relevant signaling mechanisms/pathways in cancer cells. However, despite apparent advantages of targeted therapies, challenges remain in improving clinical outcomes, which is, in part, attributable to the genetic and, equally important, phenotypic heterogeneities of cancer cells. Assumptions are made that gain/loss of function of a particular target protein or pathway is the major cause for the pathogenesis or progression of cancer. However, under tumor microenvironment-imposed selective pressure, cancer cells might adapt their signaling circuitry to develop compensatory mechanisms by taking advantage of redundant signaling pathways and/or feedback/crosstalk systems to promote drug resistance and other aggressive phenotypes. Such a "phenotypic adaptation" represents a major challenge for targeted therapy, which underlies the importance of understanding the mechanistic basis for stroma-driven tumor progression. Consequently, this talk consists of the following four topics that provide mechanistic rationale for developing novel therapeutic agents for cancer treatment.

1. Identification of a novel KRAS-E2F1-integrin-linked kinase (ILK)-hnRNPA1 regulatory loop that enables pancreatic cancer cells to upregulate KRAS expression and aggressive phenotype through communications with tumor microenvironment.
2. HDAC inhibition as a therapeutic strategy to reverse cancer-induced cachexia. Based on our hypothesis that inflammatory cytokine-induced muscle wasting is, in part, mediated through the effect of pro-cachectic HDAC isoforms on the transcriptional reprogramming of global gene expression and cell metabolism in skeletal muscles, we have successfully used the novel HDAC inhibitor developed in our laboratory AR-42 to suppress cachexia in different animal models.
3. IL-6 drives the EGFR phenotype in triple-negative breast cancer cells via a novel transcription complex.
4. Development of a novel agent that facilitates YAP1 degradation through the activation of its upstream kinase LATS1.

Key words: tumor microenvironment, tumor progression, oncogenic KRAS, histone deacetylase, inflammatory cytokines, YAP1

沈家寧 博士

Dr. Chia-Ning Shen

Education and Qualification:

12/98-04/02	University of Bath, United Kingdom, PhD in Developmental Biology
09/95-06/97	National Yang-Ming University, Taiwan, R.O.C., MSc in Biotechnology in Medicine
10/88-06/92	National Sun Yat-Sen University, Taiwan, R.O.C., BSc in Marine Biotechnology and Resources

Academic Appointments:

07/16-present	Deputy Director of Administration, Genomics Research Center, Academia Sinica, Taipei, Taiwan
06/13-07/16	Deputy Director of Academic Affairs, Genomics Research Center, Academia Sinica, Taipei, Taiwan
02/12-present	Associate Research Fellow, Genomics Research Center, Academia Sinica, Taipei, Taiwan
08/14-present	Adjunct Associate Professor, Department of Biotechnology & Laboratory Science in Medicine, National Yang-Ming University, Taiwan
08/13-present	Joint appointed Associate Professor, Institute of Bioscience and Biotechnology, National Taiwan Ocean University, Taiwan
02/09-present	Adjunct Assistant Professor, Institute of Clinical Medicine, Taipei Medical University, Taiwan
08/05-07/14	Adjunct Assistant Professor, Department of Biotechnology & Laboratory Science in Medicine, National Yang-Ming University, Taiwan
07/04-02/12	Assistant Research Fellow, Genomics Research Center, Academia Sinica, Taipei, Taiwan
02/05-07/13	Joint appointed Assistant Professor, Institute of Bioscience and Biotechnology, National Taiwan Ocean University, Taiwan
01/04-02/04	Visiting scholar, Dept. of Pathology and Dept. of Microbiology & Immunology, University of Texas Medical Branch, Galveston, Texas, United States
01/02-07/04	Research officer (postdoctoral scientist), Centre for Regenerative Medicine, University of Bath, United Kingdom
01/99-12/01	Practical demonstrator on the course of Developmental Biology & Molecular Biology, Dept. of Biology & Biochemistry, University of Bath, United Kingdom
08/97-07/98	Research assistant, Institute of Biotechnology in Medicine, National Yang-Ming University, Taiwan
06/94-07/95	Research assistant, Department of Education and Medical Research, Taipei Veterans General Hospital, Taiwan

Honors and Awards:

2015	Rotary International Presidential Charity Award 2014-2015
2012	Travel award of International Society of Stem Cell Research for attending 10th annual meeting
2010	Research work on Hepatic transdifferentiation has been listed as one of Main Significant Research Achievements in Academia Sinica
2007	Travel award of Japan Society for the promotion of science for attending NPG Nature Asia-Pacific network meeting
2002	Scholarship of International Society of Differentiation for attending the 12th International Conference of ISD at Lyon, France
2001	Travel Grant of British Society of Developmental Biology for attending 2001 Wellcome Trust Advanced Courses at Cambridge, England
2001	Entrant of January 2001 Santa Cruz Investigator Award
2000	Scholarship of International Federation of Cell Biology for attending International Congress on Differentiation, Cell and Molecular Biology at Gold Coast, Australia
2000	Travel Grant of British Society of Developmental Biology for attending BSDB 2000 Spring Symposium at Coventry, England
1999-2002	Overseas Research Student Award, Committee of vice-chancellors and principals of the Universities of the United Kingdom

Academic Service:

Reviewer and Member of Editorial Board of SCI Journals:

2016	Reviewer, Journal of Functional Food
2016	Reviewer, Journal of Cancer Biology and Research
2016	Reviewer, Annals of Public Health and Research
2016	Reviewer, Philosophical Transactions of the Royal Society A
2016	Reviewer, Biotechnology and Applied Biochemistry
2016	Reviewer, Journal of Medical and Biological Engineering
2015	Reviewer, Chemical Research in Toxicology
2015	Reviewer, Journal of Heavy Metal & Chelation Therapy
2015	Reviewer, Cancer Cell International
2015	Reviewer, Chinese Journal of Integrative Medicine
2007, 2015	Reviewer, Vaccine
2014-present	**Reviewer, Oncotarget**
2014-present	**Member of Editorial Board, Gastroenterology and Hepatology**
2014	Reviewer, Oncogene
2014	Reviewer, Colloids and Surfaces B: Biointerfaces
2014, 2015	Reviewer, BioMed Research International
2014	Reviewer, British Journal of Medicine and Medical Research
2014	Reviewer, International Journal of Medical Sciences
2013	Lead Guest Editor in the special issue of somatic cell reprograming and human diseases, TheScientificWorldJOURNAL
2013	Reviewer, International Journal of Cell Biology
2013	Reviewer, Evidence-Based Complementary and Alternative Medicine
2013	Reviewer, Journal of Biomedical Materials Research
2011-present	**Member of Editorial Board (Hepatology), TheScientificWorldJOURNAL**
2011-2014	Guest Editor/Reviewer, Journal of Medical Science
2012-present	**Reviewer, PLoS One**
2010	Reviewer, Biomacromolecules
2010	Reviewer, Molecular Nutrition and Food Research
2010-present	**Reviewer, Acta Pharmacologica Sinica**
2006	Reviewer, Differentiation
2005-present	**Reviewer, Journal of Biomedical Sciences**

Serve as Reviewer:

2016	Reviewer, Medical Research Council, United Kingdom
2016-2017	Member of Review Committee, Section of Haematology, Immunology & Oncology, Department of Life Science, Ministry of Science and Technology
2015-2016	Member of Review Committee, Section of Sensory System Medicine/Section of Oncology, Department of Life Science, Ministry of Science and Technology
2014-2015	Member of Review Committee, Section of Stem cells and Regenerative Medicine, Department of Life Science, Ministry of Science and Technology
2012-2013	Member of Review Committee, Section of Stem cells and Regenerative Medicine, Department of Life Science, National Science Council
2010	Member of Grant Rebuttal Committee, Section of basic medical research, Department of Life Science, National Science Council
2009-present	Serve as external reviewers for faculty recruiting/reappointment/promotion for NTU, NYMU, NHRI, & TMU
2005-present	Grant Reviewer, Department of Life Science, National Science Council (Ministry of Science and Technology)
2005-present	Grant Reviewer, Department of Health, Taipei City Government

Teaching & Reviewing

2013-present	Organizing the course of "Stem Cell Biology" for postgraduate students of NDMC/NTOU/NYMU/TMU & translational program of Academia Sinica together with NTU/NYMU/TMU/CMU/KMU/TZU

2007-present Member of advisory committee, Stem cells and Tissue Engineering Educational Center, Ministry of Education Advisory Office

2005-Present Serve as the organizer or a member in either the PhD qualify committee, the PhD's thesis committee or the master's thesis committee of NTU, NTOU, NYMU, NDMC, NCKU, NCHU, NCYU, TMU, NCCU, CGU, TCU & CMU.

2005-present Serve as guest lecturer in course of Stem Cell Biology (NDMC/NTOU/NYMU/NTU/ NCHU/NTHU/NCKU), Genomics Science (NDMC/NYMU), Introduction of Life Science (NDMC), Special topics in Biomedical Science (NDMC), Postgraduate Student's Seminar (NYMU /NDMC/AS Program for Translational Medicine/ AS Program of Drug Discovery and Cancer Biology), Introduction of Biotechnology & Medical Technology (NYMU / CGU) , Stem Cells and Tissue engineering (TMU), Recent advances in Stem cells and Cancer Stem Cells (TMU), Stem cells and Medicine (TMU), Stem Cells and Translational Medicine (NTU), Molecular and Medicine (AS Program of Drug Discovery and Cancer Biology/CMU/TMU), Molecular Mechanisms of Tumor Metastasis (NYMU), The Frontiers in Molecular Diagnostics Technology (CGU/NYMU/NCCU), Biotechnology and Medical Technology (NYMU)

2005-present Organizing the course of "Special Topics in Stem cells and Cancer" for postgraduate students of NYMU

Position in Professional Society:

2016-present Member of American Association for Laboratory Animal Science (ID# 000081683)
2013-present Member of Executive Director Board, Taiwan Society for Stem Cell Research
2013-present Member of American Chemical Society (ID# 30545903**)**
2013-present Member of American Association for Cancer Research (ID# 275044**)**
2007-2013 Member of Director Board. Taiwan Society for Stem Cell Research
2005-2007 Secretary in General, Taiwan Society for Stem Cell Research
2014-present Member of Taiwan Society for Developmental Biology
2005-present Member of Taiwan Society for Stem Cell Research
2004-present Member of International Society for Stem Cell Research (ID# 6302)
2002-present Member of Chinese Society of Molecular and Cellular Biology
2000-present Member of International Society of Differentiation (ISD member number# 90227)
1998-present Member of British Society of Developmental Biology

Serve as a member of Conference Organizing Committee

2015 International conference of stem cells and developmental biology & 11th annual meeting of Taiwan society for stem cell research, Academia Sinica, Taipei
2014 10th annual meeting of Taiwan society for stem cell research, National Taiwan University Medical College, Taipei
2013 International symposium on morphogenesis, development, and stem Cells & 9th annual meeting of Taiwan society for stem cell research, National Yang-Ming University, Taipei
2012 International symposium on recent advance in stem cells and cancer & 8th Annual meeting of Taiwan society for stem cell research, Kaohsiung Medical University Chung-Ho Memorial Hospital, Kaohsiung
2011 International symposium on recent advance in pluripotent stem cells & 7th Annual meeting of Taiwan society for stem cell research, Taipei Medical University, Taipei
2010 6th Annual meeting of Taiwan society for stem cell research, Chung San University, Taichung
2009 International Symposium of Stem Cells and Bioengineering & 5th Annual meeting of Taiwan society for stem cell research, National Cheng-Kung University, Tainan.
2008 International Symposia on Stem Cells, Epigenetics and Development & 4th Annual meeting of Taiwan society for stem cell research, NTUH International Conventional Center, Taipei.
2007 3rd Annual meeting of Taiwan society for stem cell research, National Chung-Hsing University, Taichung.
2006 International symposium on recent advances in stem cell research & 2nd annual meeting of Taiwan society for stem cell research, Taipei Medical University, Taipei
2005 1st annual meeting of Taiwan society for stem cell research, National Yang-Ming University, Taipei

Other academic service:

2015-present	Serve as a member of User Committee of NRPB ChemBank and HTS Resource Center
2015-present	Serve as a member of User Committee of NRPB iPSC consortium
2014-present	Serve as a member of Organizing Committee of National Biotechnology Research Park.
2014-2015	Serve as a member of User Committee of NRPB ChemBank and HTS Resource Center
2014-2016	Serve as an International Collaborative Partner (ICP) of Universiti Tunku Abdul Rahman (UTAR) Global Research Network
2014-present	Serve as a member of Flow Cytometry User Committee of Academia Sinica
2014-2015	Serve as a member of Instrument and Equipment Management Committee of Academia Sinica
2013-present	Serve as a member of Institutional Animal Care and Utilization Committee of Academia Sinica
2012-2013	Committee Member, Section of Regenerative Medicine of National Biotechnology Research Park
2012	Reviewer for evaluating new biotechnology company, Gre Tai Securities Market, Taiwan
2010-2011	Chairman of the Parent Association of Affiliated Kindergarten of Academia Sinica
2009-present	Serve as a member of Animal Care and Utilization Committee of Genomics Research Center.
2009	Review Committee, Oral Examination for Studying Abroad at Government Expense, Ministry of Education, Taiwan
2007-2009	Serve as a member of Electronic Microscopy User Committee of Academia Sinica
2007-2008	Chairman of the Management Committee, Academia Sinica Residential Complex for New Blood
2007	Reviewer for evaluating new biotechnology company, Gre Tai Securities Market, Taiwan
2006-2009	Serve as a member of Instrument committee of Genomics Research Center
2004-2006	Serve as a member of Bio-safety committee of Genomics Research Center

Development of anti-cancer strategies for pancreatic ductal adenocarcinoma via targeting unique metabolic features of cancer stem cells

Chia-Ning Shen[1,2], Chi-Che Hsieh[2], Yi-Ming Shyr[3], Wen-Shan Li[4], Chih-Chuang Liaw[5], Michael Hsiao[1], Tien-Hua Chen[3], Wen-Bin Yang[1], Geoff Holman[6] and Yuh-Pyng Sher[2]

[1]Genomics Research Center, Academia Sinica, Taipei, Taiwan; [2]The Ph.D.Program for Cancer Biology and Drug Discovery, China Medical University, Taichung, Taiwan; [3]Department of Surgery, Taipei Veterans General Hospital, Taipei, Taiwan; [4]Institute of Chemistry, Academia Sinica, Taipei, Taiwan; [4]Department of Marine Biotechnology and Resources, National Sun Yat-sen University, Kaohsiung, Taiwan; [6]Department of Biology and Biochemistry, University of Bath, Bath, United Kingdom

Pancreatic ductal adenocarcinoma (PDAC) is an aggressive type of pancreatic cancer with clinical characteristics of local invasion and early metastasis. The current chemotherapeutic drug can cause pancreatic cancer remission but often fails to cure pancreatic cancer due to the existence of cancer stem cells (CSCs). Indeed, the emergence of the cancer stem-cell theory in the last 20 years has shed light on many of the unresolved challenges. However, the key characteristics of cancer stem cells (CSCs) remain to be determined. Accumulating evidences revealed the similar features shared by pluripotent stem cells and cancer stem cells, we therefore hypothesize acquisition of stemness characteristics during the reprogramming process is superficially reminiscent of the dysplastic transformation proposed in cancers. Initially, comparative genome-wide profiling analysis was initially conducted on pluripotent stem cells (PSCs) and different subpopulation of pancreatic cancer cells. We revealed expression level of pluripotent transcriptional factors and surface markers such as Oct4, Sox2, Nanog, Lin28, CD133, and ABCG2 was significantly higher in ABCG2+CD44+ subpopulation of pancreatic cancer cells correlated with high metastatic potentials suggesting ABCG2+CD44+ possess the features of CSCs. The further analysis was performed on metabolic pathway and revealed, very similar to PSCs, the metastatic ABCG2+CD44+ subpopulations had evaluated level of fructose transporter -GLUT5 & ketohexose suggesting ABCG2+ CD44+ CSC subpopulations can utilize fructose efficiently. Utilizing tumor-engraft mice and spontaneous pancreatic cancer mice, we actually revealed fructose substitution enhanced drug resistance and CSC-mediated metastasis possibly via up-regulating ST6Gal1-regulated α2,6 sialylation as knockdown of ST6Gal can affect self-renewal, invasion potential and ABCG2 efflux ability of ABCG2+CD44+ CSC subpopulations.. Clinical significance of ST6Gal1, GLUT5 and ABCG2 was investigated and revealed that PDAC patients expressing higher levels of ST6Gal1 and GLUT5 had poorer prognosis compared to other groups. Since identifying GLUT5/ST6Gal1 critically regulates self-renewal and metastasis capability of ABCG2-expressing CSC subpopulations, we have identified several ABCG2-inihbiting cyclohexylmethyl flavonoids and developed GLUT5 and N-linked sialyltransferase inhibitors, we found that Ugonins J and K with a non-polar cyclohexylmethyl group were found to be able to efficiently suppress self-renewal propagation of ABCG2+CD44+ pancreatic cancer cells. Furthermore, we also revealed GLUT5 inhibitor-2,5-anhydro-D-mannitol and sialyltransferase inhibitor-Fcw34 can suppress invasion potential of ABCG2+CD44+ CSCs *in vitro* and inhibited CSC-mediated metastasis *in vivo*. The findings implied GLUT5 and ST6Gal1 can be important therapeutic targets for developing efficient treatments for PDAC patients in the near future.

陳海峰 博士
Dr. Hai-Feng Chen

Experience

Dr. Haifeng Chen received his B.S. degree in Traditional Chinese Medicine (2000) and Ph.D. in chemistry of natural products (2005) from Shenyang Pharmaceutical University. He then performed two years of postdoctoral work in the Research Institute of Tsinghua University in Shenzhen. Till now, he served as Professor and Assistant to the Dean in School of Pharmaceutical Sciences, Xiamen University (2013). He is an author of over 50 publications, co-inventor of 14 applied patents. He is also the peer reviewer of several journals, including *Journal of Agricultural and Food Chemistry*、*European Journal of Medicinal Chemistry*、*International Journal of Molecular Sciences*、*Journal of Molecular Catalysis B*、*Molecules*, *etc.*

Research

His current research interests are mainly in the areas of bio-guided natural products drug discovery and development from herbal plant and microorganism resources, especially in the fields of cancer chemotherapy, Diabetes, AD and AIDS, etc. He is also interested in the quality control and development of Traditional Chinese Medicine. He has been supported by more than 20 program projects recent years, including the National Natural Science Foundation of China, Fujian major program grant, Xiamen Science and Technology Key program grant, and Fundamental Research Funds for the Central Universities, etc.

Disease related signalingpathway based bioactive compounds discovery from TCM.

Hai-Feng Chen

The Dean in School of Pharmaceutical Sciences, Xiamen University

Discovery of bioactive compounds from Traditional Chinese Medicine (TCM) is always the hot pot way for finding new drug candidates. With the development of cell and molecular biology, the disease related signaling pathway is more and more important to evaluate the activity of compounds/fractions isolated from TCM. Using these tools, more bioactive compounds are discovered for their new application. This lecture will introduce two examples for active compounds research of anti-AD from *Vitis thunbergii var*. taiwaniana (VTT) through APP- Aβ signaling pathway and anti- liver cancer from bear bile combined with synthetic analogs. The possible ways for new drug discovery from TCM are also discussed.

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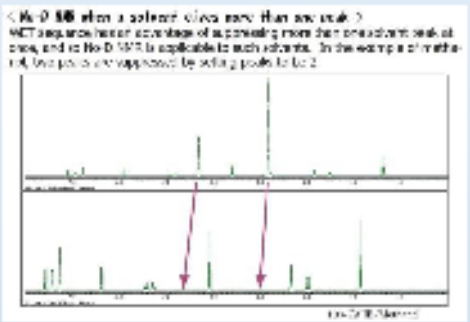

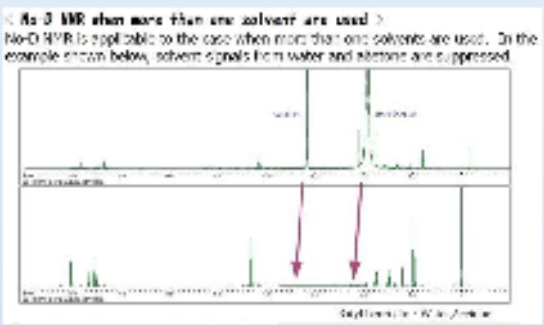

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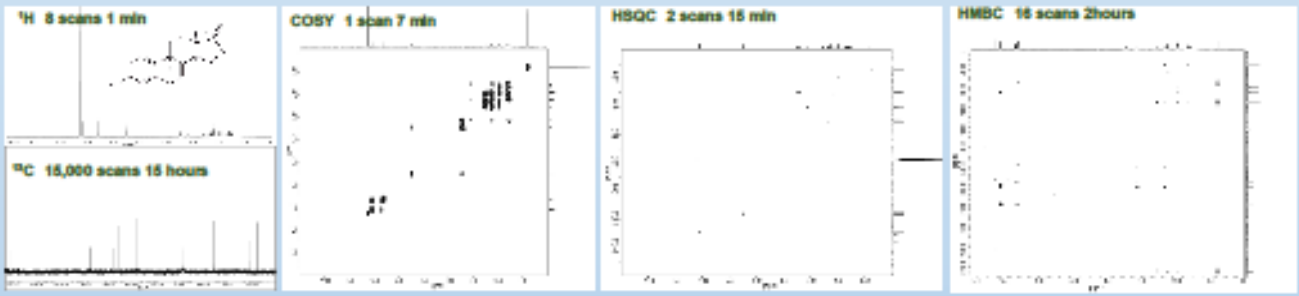
2 in 1 Probe

新一代2合1探頭，讓您不需要再氫與碳靈敏度之間再做決擇。使用一隻探頭，即可得到高質量的一維氫、碳及二維光譜，縮短實驗時間。

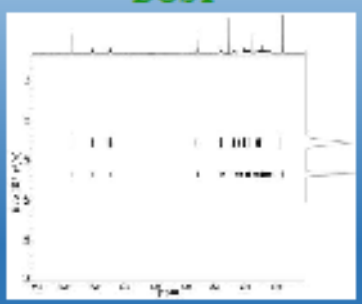
Example : Equilin, 1 mg in $CDCl_3$ @ JNM-ECS400 + Royal Probe



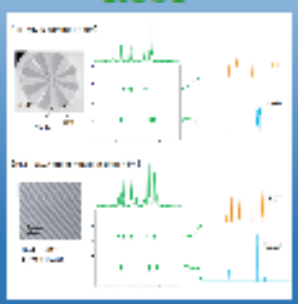
Mixture Analysis

搭配高準確性的DOSY及ROSY實驗。不論在液態或固態樣品，讓您輕鬆對於不易分離的混合物樣品進行解構與成分分析。

DOSY



ROSY



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Email: service@widetron.com

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創源生物科技-化合物研發的決策管理

Workshop II:

Chemical Abstracts Servic-天然物合成與分析方法檢索

Workshop III:

台灣島津(Shimadzu Scientific Instruments)- Nexera UC New Concept On-line SFE-SFC-MS System

壁報論文
Post Papers

Session I:
Natural Products (PN01-PN46)

Session II:
Pharmacology (PP01-PP47)

Session III:
Traditional Chinese Medicine (PT01-PT38)

Session I: Natural Products

No	Title and authors
PN01	**More than antibiotics: a novel natural compound combination by exploring the interaction between brown root rot disease pathogen, *Phellinus noxius* and *Burkholderia* sp. 869T2** **Ying-Ning Ho**, Pi-Yu Chen, Ying-Mi Lai, Shih-Neng Lin, Yu-Liang Yang
PN02	**Antiallergic Phorbol Ester from the Seeds of *Aquilaria malaccensis*** **Michal Korinek**,Vitthal D. Wagh, Bing-Hung Chen, and Fang-Rong Chang
PN03	**Three New Phorbol Esters from *Aquilaria malaccensis* Seeds** **Vitthal D. Wagh**, Michal Korinek, I-Wen Lo, Bing-Hung Chen, Yuan-Bin Cheng, and Fang-Rong Chang
PN04	**Zoanthamine-type Alkaloids from the Taiwanese Zoanthid *Zoanthus kuroshio* and Their Effect on Inflammation and Platelet Aggregation** **Yu-Ming Hsu**, Fang-Rong Chang, I-Wen Lo, Kuei-Hung Lai, Mohamed El-Shazly, Tung-Ying Wu, Ying-Chi Du, Anders Backlund, Tsong-Long Hwang, Chin-Chung Wu, Yuan-Bin Cheng and Yang-Chang Wu
PN06	**New 2-(2-phenylethyl)-4*H*-chromen-4-one Derivatives in Agarwood from *Aquilaria sinensis*** **Wang-Sin Ling (王馨翎)**, Mei-Ing Chung (鍾美英), Jih-Jung Chen (陳日榮)
PN07	**Polyphenols and Their Cytotoxic Activity from the Endemic Plant, *Mitellaformosana*** Chien-Jou Peng, Ming-Jen Cheng, Shih-Wei Wang, Chu-Hung Lin, Ih-Sheng Chen, **Hsun-Shuo Chang**
PN08	**Chemical Constituents and Cytotoxicity from the Stem of *Anodendron benthamianum*** **Wan-Lun Wu**, Shin-Wei Wang, Chu-Hung Lin, Ih-Sheng Chen, and Hsun-Shuo Chang
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PN10	**Novel angiogenesis inhibitors from *Phoma* sp. NTOU4195** **Shin-Wei Wang**, Ming-Shain Lee, Chih-Hisn Tang, and Tzong-Huei Lee
PN11	**Piper betle extract borny cis-4-hydroxycinnamate suppresses human melanoma cell metastasis by inhibiting matrix metalloproteinase-2/-9 through multiple signaling pathways and inhibiting epithelial to mesenchymal transition** Zih-Yan Yang, Chi-I Chang, Mei-Li Wu and **Yu-Jen Wu**
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PN15	**5β,19-Epoxycucurbitane Triterpenoids and their Glycosides from the Vines of wild *Momordica charantia*** **Li-Jie Zhang**, Hung-Tse Huang, Chia-Ching Liaw, Shih-Yen Huang, Zhi-Hu Lin, and Yao-Haur Kuo
PN16	**Disruption of Mitochondrial Membrane Potential and Overproduction of Reactive Oxygen Species Leads to Apoptosis in Ca9-22 Cells in Response to 13-Acetoxysarcocrassolide** **Yi-Cheng Chou**, Bo-Rong Peng, Jui-Hsin Su, Yu-Cheng Chen, Shou-Ping Shih, Young-Shiou Lin, Kuan-Chih Wang, and Mei-Chin Lu
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PN18	**Chemical Constituents and Their Bioactivities from a Formosan Gorgonian Coral *Pinnigorgia* sp.** **Yu-Chia Chang**, Chan-Shing Lin, and Ping-Jyun Sung
PN19	**2-Amino-2-deoxysugar-Bearing Triterpenoid Saponins for the Development of Antitumor Agents** **You-Yu Lin**, Yu-Pu Juang, Hsin-Min Hsiao, She-Hung Chan, Jih-Hwa Guh, and Pi-Hui Liang
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PN23	**3-hydroxy-2-(hydroxymethyl)-anthraquinone from *Morinda umbellata* L. induces G1 arrest and apoptosis in HepG2 cells** Lie-Chwen Lin, Ruie-Yu Hsu, and **Chun-Tang Chiou**
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PN28	**Antioxidant activity and antiproliferative effect of the Jaboticaba (*Myrciaria cauliflora*) seed extracts in breast cancer cells** Chih-Yun Chen , **Ku-hsi Tseng**, I-Hsiao Chen , and I-Fen Chen
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PN31	**Separation and Identification on Stereoisomers of Manoalide and Luffariellin Derivatives and Their Configuration-depending Antileukemic Effects *In Vitro* and *In Vivo*** **Kuei-Hung Lai**, Mei-Chin Lu, Jui-Hsin Su, Yu-Ming Hsu, Mohamed El-Shazly, Ying-Chi Du, Yu-Che Chuang, Shu-Li Chen, Chy-Jia Wang, Ming-Yuan Hung, Fang-Rong Chang, Yang-Chang Wu, and Anders Backlund
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PN37	**Anti-Hepatitis C Virus Constituents from *Flueggea virosa*** **Chih-Hua Chao**, Ju-Chien Cheng, De-Yang Shen, Hui-Chi Huang, Yang-Chang Wu, and Tian-Shung Wu
PN38	**Vinger-processing enhances the anti-oxidant activity and alcohol-dispelling effect of spearmint** Shorong-Shii Liou, **Yen-Ju Chiu**, Yi-Shiuan Liao, Han-Yu Tsai, and I-Min Liu
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PN42	**New Cytotoxicity and Anti-inflammatory Amberin-Type Triterpenoids from Ambergris of the Sperm Whale *Physeter macrocephalus* L.** Yen-Chen Tsai, Chieh-Ming Chang, Jiun-Hung Chen, Rui-Xuan Cai, Zhang-Ting Wu, and **Shi-Yie Cheng**
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PN44	**Columnaristerol A, a novel 19-norsterol from the Formosan octocoral *Nephthea columnaris*** **Ta-Yuan Whuang**, Li-Guo Zheng, Jing-Hao Xu, Pin-Chang Huang, and Ping-Jyun Sung
PN45	**Bioactivity diterpenoids from the cultured soft coral *Lobophytum crassum*** **Bo-Rong Peng**, Pei-Cheng Huang, Yuan-Jhong Wu, Ping-Jyun Sung, and Jui-Hsin Su
PN46	**New Briarane-Type Diterpenoids from a Formosan Octocoral *Briareum* sp. (Briareidae)** **Yin-Di Su**, Zuo-Jian Liao, Yi-Ming Lin, Zong-You Li, and Ping-Jyun Sung
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PP02	***Ex vivo* and *in vivo* studies of M3BIM, a synthetic benzimidazole-derived maltotriose that inhibits platelet activation** Ray-Jade Chen, Joen-Rong Sheu, Wen-Bin Yang, and **Wan-Jung Lu**
PP03	**Selenite binding capacity of natural products to protect lens crystallins: implications for anti-cataractogenesis** **Tzu-Hua Wu**, Jiahn-Haur Liao, Fu-Yung Huang, and Shih-Hsiung Wu
PP04	**Sesamol modulates atherogenic L5-induced cell apoptotic signaling in vivo and in vitro** Li-Zhen Chen , Fang-Yu Chen, Jia-Rong Wu, Yu-Pu Su , Hsuan-Lun Hung , Ku Shan, and **Ming-Yi Shen**
PP05	**Lobohedleolide suppresses hepatitis C virus replication via JNK/c-Jun-C/EBP-mediated down-regulation of cyclooxygenase-2 expression** **Chun-Kuang Lin**, Jin-Ching Lee, Jyh-Horng Sheu, Chih-Chuang Liaw
PP06	**A Dibromotyrosine Derivative Extracted from *Pseudoceratina sp.* Inhibits TGF-β Responsiveness by Suppressing TGF-β type I Receptor Serine/Threonine Kinase Activity** **Yu-Chen Kao**, Ping-Jyun Sung, Zhi-Hong Wen, and Chun-Lin Chen
PP07	**Xanthohumol from Humulus lupulus L. induces glioma cell autophagy via inhibiting Akt/mTOR/S6K pathway** **Kuan-Hung Lin** and Wan-Jung Lu
PP08	**The alleviated tumorigenicity of human stem-like lung cancer cells carrying mutated epidermal growth factor receptor by aqueous extract of *Brucea javanica*** Seung-Hun Kim, Po-Wei Fan, Chang-Heng Hsieh, Hsuan-Yuan Lin, and **Kang Fang**
PP09	**Role of Opioid Receptors Signaling in Electroacupuncture- Induced Myocardial Protection against Ischemia/Reperfusion Injury in Rats** Hsin-Ju Tsai, Shiang-Suo Huang, Hsiao-Ting Wang, and **Jen-Hwey Chiu**
PP10	**Protective effect of submerge-cultured *Eurotium cristatum* against lipopolysaccharide-induced acute renal failure in mice** Mei-Chin Mong, Yuh-Shuen Chen, Yi-Jun Lin, You-Han Zhong, and **Chun-Hung Chiu**
PP11	**Saikosaponin d induces cell death through caspase-3-dependent, caspase-3-independent and mitochondrial pathways in mammalian hepatic stellate cells** Ming-Feng Chen, S. Joseph Huang, Chao-Cheng Huang, Pei-Shan Liu, Kun-I Lin, Ching-Wen Liu, Wen-Chuan Hsieh, **Li-Yen Shiu**,and Chang-Han Chen
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PP13	**Honokoil-induced Melatonin set out to ER stress signaling thwarts epithelial mesenchymal transition and peritoneal dissemination via calpain-mediated C/EBPβ and NFκB cleavage** Sheng-Mao Wu and **Meei-Ling Sheu**
PP14	**The protective effect and mechanisms of *Dendrobium nobile* Lindl in retinal ischemia** Hsiao-Ming Chao, Ming-Yi Lai, Jorn-Hon Liu, and **Huei-Wen Shiu**
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PP20	**Exploring plant metabolism in situ by surface-assisted laser desorption/ionization imaging mass spectrometry** Ying-Mi Lai, **Han-Jung Lee**, and Yu-Liang Yang
PP21	**Mechanism of NKSE-5A inhibits fMLP-induced superoxide generation in human neutrophils** **Tzu-Chi Tseng**, Hsiang-Ruei Liao, and Ih-Sheng Chen
PP22	**The anti-inflammatory effect of 2-(4-hydroxy-3-prop-2-enyl-phenyl)-4-prop-2-enyl-phenol by targeting Lyn kinase in human neutrophils** **Hsiang-Ruei Liao**, Ching-Ru Chien, Jih-Jung Chen, Tzung-Yan Lee, Shinn-Zhi Lin, and Ching-Ping Tseng
PP23	***Ilex kaushue* and Its Bioactive Component 3,5-Dicaffeoylquinic Acid Protected Mice from Lipopolysaccharide-Induced Acute Lung Injury** **Yu-Li Chen**, Tsong-Long Hwang, Wen-Yi Chang, and Pei-Wen Hsieh
PP24	**Protein profiling in serum after Astragalus membranaceus (BP002) treatment in mice reveals potential anti-proliferation markers** Ailun Tseng, Mei-Hsien Lee, and **Li-Jen Su**
PP25	**Effects of components isolated from BP004W, a traditional Chinese medicine, induces apoptosis in MCF-7 breast cancer cell lines** Wan-Yi Chiou, Chang-Han Chen, Jun-Jie Lin, Chi-Wen Deng, and **Li-Jen Su**
PP26	**Downregulation of Sialyltransferase to Suppress Tumor Growth and Inhibit Metastasis in Breast Cancer and Melanoma Cells by Sialyltransferase Inhibitor** **Han-En Tsai**, Chia-Ling Chen, Tzu-Ting Chang, Chih-Wei Fu, Ming-Hong Tai, and Wen-Shan Li
PP27	**Cationic antimicrobial peptides TPX induces necrosis in U87MG glioblastoma cells through mitochondrial ROS and p38 pathways** **Bor-Chyuan Su**, Nandhini Sabathi, and Jyh-Yih Chen
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PP30	**Modulatory effects of CMU-104 on neuroinflammation** **Yuh-Fung Chen**
PP31	**Heteronemin, a sesterterpene derivative, induces apoptosis in Molt4 leukemia cancer cell line and reduces tumor growth *in vivo* xenograft animal model** **陳又誠**
PP32	**Protective effects of Taxifolin against acetaminophen-induced acute liver injury** **Hsien-Hao Tseng**, Yun-Chieh Chen, Keng-Fan Liu, Kai-Li Chen, You-Ye Lin, I-Chin Tsai, and Jen-Chieh Tsai
PP33	**Dragonbloodin A1 and A2: novel flavan trimers and anti-inflammatory principles from Sanguis Draconis** Hsin-Yi Hung, Wen-Ke Du, **Ping-Chung Kuo**, and Tian-Shung Wu
PP34	**Xanthine derivative KMUP-1 improves neuropathic pain through the modulation of Cav2.2, Nav1.3 and K_{ATP} channels in rat spinal cord** **Chien-Lun Kung**, Yun-Ju Wang, Su-Ling Hsieh, and Bin-Nan Wu
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PP37	**Evaluation of Self-Assembled Block Copolymers Containing Disulfide Bond for Co-delivery of Chemo and Gene Drugs** **Li-Fang Wang**

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PP42	**Discovery of non-hydroxamate inhibitors selectively targeting Class IIa HDACs by exploiting virtual screening strategy** **Hui-Ju Tseng**, Chang-Yi Liu, Chun-Yung Chen, Kai-Cheng Hsu, and Wei-Jan Huang
PP43	**Synthesis of Yakuchinone-Derived Compounds that Inhibit Aβ-Aggregation** **Liang-Chieh Chen**, Cheng-Chung Yen, Hui-Ju Tseng, Yun-Yi Huang, and Wei-Jan Huang
PP44	**The apoptotic mechanisms of MT-6, a mitotic arrest inducer, in human ovarian cancer cells** **Mei-Chuan Chen**, Yi-Chiu Kuo, Che-Ming Teng, and Shiow-Lin Pan
PP45	**Development and characterization of lecithin-based self-assembly mixed micellar drug delivery systems for curcumin** **Chia-Yu Su,** Ling-Chun Chen, Ming-Thau Sheu, and Hsiu-O Ho
PP46	**Norcantharidin-induced prostate cancer cells apoptosis through modulation of the Akt/FoxO4/Mcl-1 signaling cascade and upregulation of miR-320d-mediated suppression of Mcl-1 expression** Chih-Chuang Liaw, and **Yi-Hsien Hsieh**
PP47	**Inhibition of ultraviolet B-induced expression of the proinflammatory cytokines in the cornea by fucoxanthin treatment in an animal model** Ching-Ju Lee, Shiu-Jau Chen, Tzer-Bin Lin, Jia-Zeng Chen, and **Kuang-Wen Tseng**

Session III: Traditional Chinese Medicine

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PT05	**Anti-diabetic Activity of Prepared Rehmanniae Radix Oligosaccharide** Chen-Yuan Chiu, Wei-Hsiang Hsu, Hui-Kang Liu,Shing-Hwa Liu, and **Yun-Lian Lin**
PT06	**Paeonol protects against neuroinflammatory effects through AMPK-α and GSK3 in microglial cells** Chingju Lin, **Cheng-Fang Tsai**, Hsiao-Yun Linc, and Dah-Yuu Lu
PT07	**Rhodiola crenulata extract counteracts the effect of hypobaric hypoxia in rat heart via redirection of the nitric oxide and arginase 1 pathway** **Shih-Yu Lee**
PT08	**Astragaloside promotes intestinal epithelial wound repair via stimulation of Arginine uptake and protein synthesis** Wei-Cheng Tsai and **Tsu-Chung Chang**
PT09	**Phytochemical Evaluation of Leaf Galls of *Lycium chinense* in Miaoli** **Yu-Hsuan Lin**, Yuan-Chu Chen, Ying-Chi Du, Chih-Sheng Hung, Jhin-Syuan Wang, and Yu-Shan Lin
PT10	**SMW (三妙丸) protects of cartilage matrix degradation and ameliorates the bone lose in osteoarthritis and menopause osteoporosis: animal study** **Wen-Fei Chiou** and Yu-Ling Huang
PT11	**Efficacy of Bu-Yi Formulas in Reducing Cancer-related Fatigue** Chien-Jui Chen, Hung-Tse Huang, Li-Jie Zhang, Yao-Haur Kuo, and **Chun-Tang Chiou**
PT12	**Neuroprotective effects of Chinese herbal formula B401 in the mouse model of Parkinson's disease induced by MPTP** **Ching-Lung Lin**, Chih-Hsiang Hsu, Sheue-Er Wang, Ching-Tzu Lee, Chi Hung, Shuenn-Jyi Sheu, and Chung-Hsin Wu
PT13	**Remission roles of the herbal formula B401 in mice with manganese-induced neurotoxicity** **Chih-Hsiang Hsu**, Sheue-Er Wang, Ching-Lung Lin, Shuenn-Jyi Sheu, Chung-Hsin Wu
PT14	**Chinese herbal formula B401 alleviates menopausal symptoms in female mice** Yu-Tsen Hsu, Sheue-Er Wang, Ching-Lung Lin, Chih-Hsiang Hsu, Shuenn-Jyi Sheu, and Chung-Hsin Wu
PT15	***In vitro* seed germination and bulblet formation in *Fritillaria cirrhosa* D. Don** **Hung-Chi Chang**, Chia-Chen Chen, Dinesh Chandra Agrawal, Wan-Ju Lu, Chia-hsin Lin,Hsin-Sheng Tsay, and Chao-Lin Kuo
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PT17	**Hepatoprotective Effect of the Fruits of *Polygonum orientale* L. Against Carbon Tetrachloride-Induced Liver Fibrosis in Mice** **Hao-Yuan Cheng**, Yung-Jia Chiu, Yun-Chieh Chen, and Wen Huang Peng
PT18	**Effects of different additives medium for the solid culture of active ingredients in *Cordyceps militaris*** Chih-Hui Yang, **Pei-Chun Hsu**, Po-Heng Chen, and Keng-Shiang Huang
PT19	**Development of highly potent Tyrosinase Inhibitors from Traditional Chinese Medicine to Oligopeptides** **Tien-Sheng Tseng**, Yu-Ching Lee, Wang-Chuan Chen, Nai-Wan Hsiao, and Keng-Chang Tsai

PT20	**Optimization of the neuroprotective effect using essential components from BHD for an acute ischemic stroke** Yu-Chang Hou, Kou-Tong Liou, Yea-Hwey Wang, and **Yuh-Chiang Shen**
PT21	**Evaluation of Current Regulations on Traditional Chinese Veterinary Medicine** **Liang-Hsuan Chien**, Ying-Chen Chiang, Po-Chow Hsieh, Shorong-Shil Liou, and I-Min Liu
PT22	**Research of Turmeric Dripping Pills on Learning Memory** Shu-Yu Li, Yu-Chi Yang, Ya-Wen Wu, Chun-Yann Lee, and **Daih-Huang Kuo**
PT23	**Research of Turmeric Dripping Pills on Learning Memory** **Shu-Yu Li**, Yu-Chi Yang, Ya-Wen Wu, Chun-Yann Lee, and Daih-Huang Kuo
PT24	**Investigation and Analysis of Chinese Herb Prescription in Pharmacopoeia between Taiwan and China** **Cheng-Ying Wang**, Ying-Chen Chiang, Po-Chow Hsieh, I-Min Liu, and Shoring-Shii Liou
PT25	**Rationality of Chinese medicine preparation quality control in Taiwan - Chinese Herbal Wine** **Wan-Ru You**, Ying-Chen Chiang, Po-Chow Hsieh, and Po-Chuen Hsieh
PT26	**Anti-Platelet Aggregation Constituents from the Rhizomes of *Curcuma zedoaria*** **Jih-Jung Chen**, Hsiang-Ruei Liao, and Tung-Han Tsai
PT27	**New Chalcone and Antioxidant Constituents from *Glycyrrhiza glabra*** **Jih-Jung Chen**, Lin-Yang Cheng, and Sin-Ling Wang
PT28	**Bioactivity studies of the extracts from *Glechoma hederacea* in MDA-MB-231 breast cancer cells** **Chen-Zu Xu** , Jie Kung , I-Hsiao Chen, and I-Fen Chen
PT29	**Protective Effects of Costunolide Against Hydrogen Peroxide-Induced Injury in PC12 Cells** Hung-Chun Yeh, Shu-Ting Huang, Yu-Chuan Chen, Ming-Huiand Huang, Yi-Lun-Lun Hsieh, Zih-Yuand Fang, and **Chung-Yi Chen**
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PT33	**The anti-inflammatory activities of compounds isolated from *Sarcandra glabra*** **Yun-Chen Tsai**, Shih-Han Chen, Lie-Chwen Lin, and Shu-Ling Fu
PT34	**Influence of temporary immersion system on micropropagation and analysis its secondary metabolites of *Glossogyne tenuifolia* Cassini- A traditional medicinal plant** **Chia-Chen Chen**, Hung-Chi Chang, Dinesh Chandra Agrawal, Chi‑Rei Wu, Chia-hsin Lin, Jaw-Chyun Chen, Hsin-Sheng Tsay, and Chao-Lin Kuo
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PT36	**The interaction of Antimicrobial Agents used in cosmetic combination with *Cyperus rotundus* (香附片) and *Asparagus cochinchinensis* (天門冬)** **Yu-Chi Chen**, I-Ling Liu, and Shih-Ling Juan
PT37	**Study standardized process for *Aconitum carmichaeli* Debx** **Yun-Chien Lai**, Fang-Rong Chang, Chi-Jung Tai, Shu-Tuan Chiang, and Yang-Chang Wu
PT38	**Gan-Lu-Siao-Du-yin, a prescription of traditional Chinese medicine, inhibited enterovirus 71 replication, translation, and virus-induced cell apoptosis** **Ya Ping Cheng**, Wei Chang Lee, Ming Hong Yen, Lien Chai Chiang, and Jung San Chang

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~線上超臨界流體萃取 - 超臨界流體層析 - 質譜儀~

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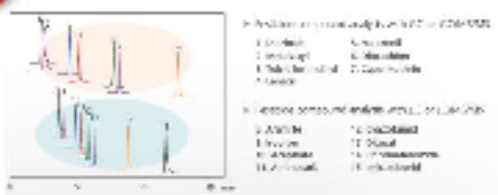
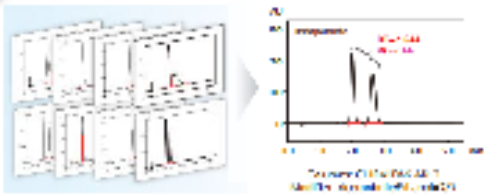
- ★ SFC-MS (UV)
- ★ Chiral Screen System

- ☑ 自動化線上萃取-分析
- ☑ 直接萃取與分析不穩定化合物, 避免降解
- ☑ 實現極高速、高解析、高靈敏度分析

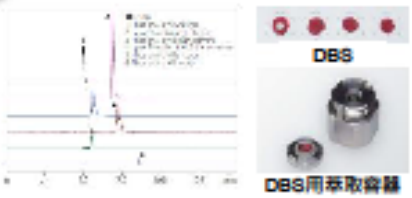
食品中有效成分及農藥殘留分析



光學異構物分析

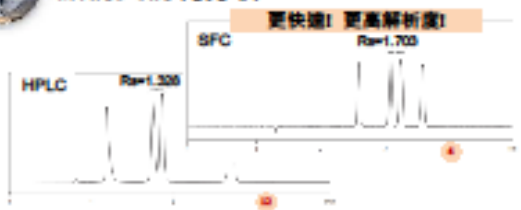


DBS代謝物分析



DBS血漿磷脂質萃取與分析

結構異構物分析



Tocopherol Isomers: HPLC與SFC分析比較

AA / ICP-OES (MS) | ICPMS | HPLC / UHPLC / SFC LC-MS (MS) | GC-MS (MS) | MALDI-TOF (TOF)

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天然藥物分析及研究設備

詳細目錄備索　敬請來電洽詢

三重四極桿液相層析串聯式質譜儀 LCMS-8050
超高效率串聯式液相層析質譜儀 LCMS-8040
高效率液相層析質譜儀 LCMS-2020
超高效率液相層析儀 LC-30A series (UHPLC)
高效率液相層析儀 LC-20A series / LC-2030 / LC-2040

串聯式氣相層析質譜儀 GCMS-TQ8040
氣相層析質譜儀 GCMS-QP2020
氣相層析儀 GC-2010Plus / GC-2014A

紫外/可見光分光光譜儀 UV-1800
原子吸收光譜儀 AA-7000
傅立葉轉換紅外線光譜儀 IRAffinity-1S
氣/液相層析儀用 樣品注射針
氣/液相層析儀用 分離管柱
純化用 管柱充填劑
紫外/可見光分光光譜儀用 石英、玻璃液槽

感應偶合電漿光譜儀 ICPE-9800

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TAF和TFDA ISO/IEC17025實驗室雙重認證

勝昌檢驗中心服務項目

一、藥材基原鑑定：組織切片、粉末鏡檢。

二、定性分析：TLC鑑別。

三、定量分析：指標成分分析、精油含量測定。

四、污染物質檢測：總重金屬（以鉛計）、個別重金屬、黃麴毒素、農藥殘留、二氧化硫。

五、微生物檢驗：好氧性微生物總數、大腸桿菌、沙門氏桿菌、金黃色葡萄球菌、綠膿桿菌、黴菌及酵母菌總數。

六、其他：五大項檢驗、塑化劑。

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